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MISSOURI

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Fig. 1.—The Capitol, Jefferson City.

TARR AND McMURRY GEOGRAPHIES

SUPPLEMENTARY VOLUME

MISSOURI

BY

J. U. BARNARD

PRINCIPAL HUMBOLDT SCHOOL, KANSAS CITY, MISSOURI

New York
THE MACMILLAN COMPANY
1908

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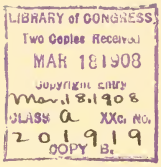

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PREFACE

THE author has aimed to get hold of the salient facts and forces which have made the state of Missouri what it is. The contour of the region, the character of its soil, the products of its farms and factories, and the centers of commerce, together with the means of transportation, have been chosen as the main subjects for treatment in these pages. Place geography has been enforced by presenting products in their proper relation to their origin, as it has been generally admitted that isolated facts have small value, and that correlated ideas lead back to great principles and systems.

Causes are here reached by a study of effects as concrete results. While the adult may go from causes to effects, the child most naturally goes from effects to causes. What is it, whence came it, how did it come to be as it is, is the order of the child-mind.

The common things of the everyday lives of the pupils are rich with materials for training and culture, and the teacher should learn their value in teaching local and state geography.

With but few exceptions, the illustrations found in the volume are from original sources, and the author hopes they will add clearness and interest to the discussion.

J. U. BARNARD.

PRINCIPAL HUMBOLDT SCHOOL,
KANSAS CITY, MISSOURI,
February 25, 1908.

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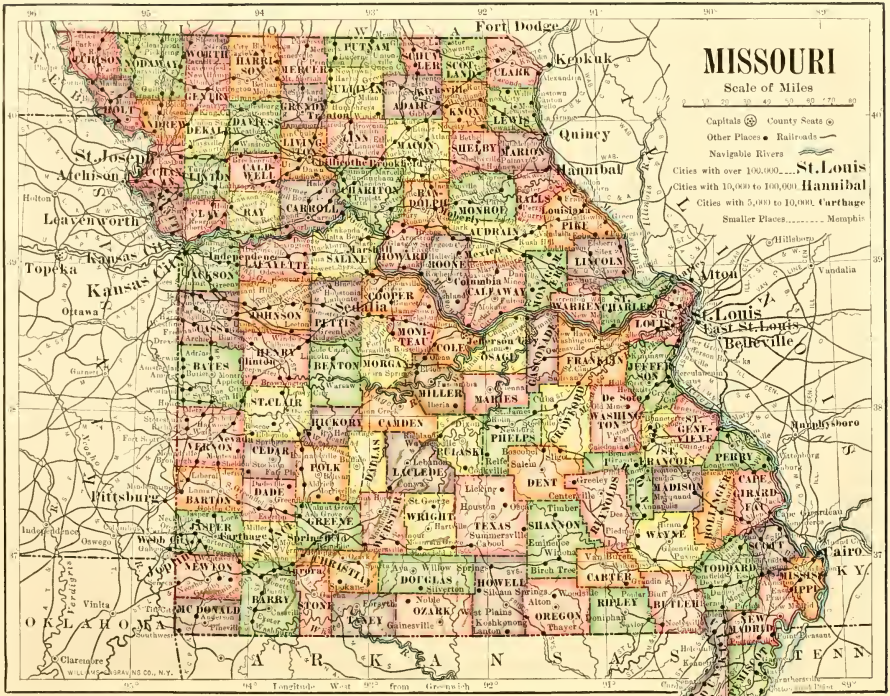
MISSOURI


MISSOURI
Scale of Miles
Capitals
County Seats
Other Places
Railroads
Navigable Rivers
Cities with over 100,000.....St.Louis
Cities with 10,000 to 100,000.Hannibal
Cities with 5,000 to 10,000. Carthage
Smaller Places..... Memphis
Fort Dodge
Keokuk
Quincy
Hannibal
St.Joseph
Atchison
Leavenworth
Kansas
Kansas City
Topeka
Ottawa
Independence
Pittsburg
Carthage
Springfield
Joplin
Neosho
Vinita
OKLAHOMA
Clarendon
ARKANSAS
Alton
St.Louis
East St.Louis
Belleville
Hillsboro
Vandalia
Nashville
Cairo
KY
TENN
Longitude West from Greenwich

MISSOURI

HISTORICAL DEVELOPMENT

Growth. — Missouri occupies a central position in the United States. In population and material resources she ranks fifth among the states of the country. Her development has been rapid, and her growth in the elements of strength has been satisfactory to her citizens (Fig. 2). The first settlers came from the North and the East, and from the lands beyond the sea. At a later time they came from Virginia, Tennessee, and Kentucky, — a hardy, industrious, and intelligent people bent upon making homes in the then new West. Missouri has kept pace with the progress of the surrounding states; her central position in the Mississippi Valley, her fertile soil, and favorable climate have contributed much to her great progress and development (Fig. 3).

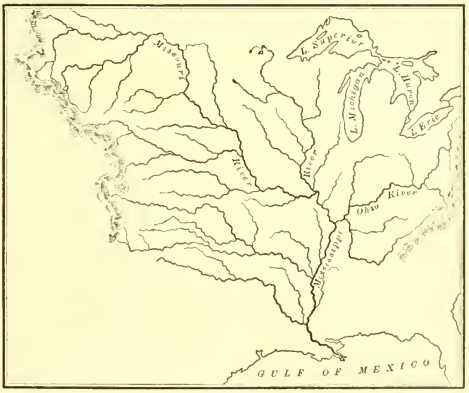


Fig. 2.
The Mississippi Valley.

Explorations. — Explorers, many of them, came to "spy out the land," but as a rule little of permanent value was accomplished by them. Some were looking for personal wealth, — gold and silver and precious gems, — while others desired to add to the possessions

of their own countries. Perhaps the most important thing they did was to make known the riches of the soil of the new country, the value and extent of its mineral wealth, and the promise of reward for honest toil.

De Soto. — Among the men whose desire led them to hunt for fame and wealth in the new country was Hernando de Soto, a Spanish explorer, who spent much time in conquest. He succeeded

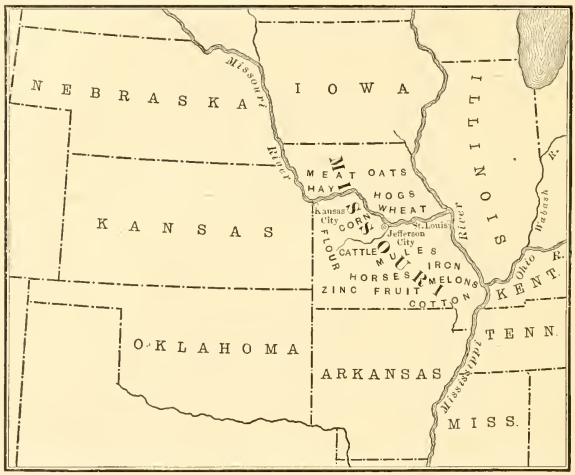


FIG. 3.
Missouri and her Neighbors.

in acquiring half a million dollars, and fitted out an expedition to the New World. Attracted by the reports of fabulous wealth to be found in Florida and in the region beyond, he landed at Tampa Bay and traveled over the country to the Mississippi River, which he reached in 1541. Here at the lower Chickasaw Bluff, a short distance below the present site of Memphis, Tennessee, De Soto and his men crossed the Mississippi and entered Missouri near New Madrid County. Spurred on by further promise of wealth, he changed his course to the westward and penetrated the state some two hundred miles, probably well into the Ozark Mountains. He found his way to Hot Springs, Arkansas, where he passed the winter of 1541–1542. But De Soto's men grew discouraged and became desperate. They

turned again toward the sea and turned back to the Mississippi, near the city of Natchez. Here De Soto was seized with a malignant fever from which he soon died. "In the midst of the solemn night his sorrowful companions wrapped the dead hero's body in a flag, and rowing out a distance from shore, sunk it in the Mississippi."

Marquette and Joliet. — In the year 1673 Marquette, a Jesuit missionary, and Joliet, a fur trader, moved down from the North and entered the Mississippi River. For a full month their canoes carried them to the South, beyond the mouth of the Arkansas River, to within a short distance of the southern line of the state by that name. They turned their boats up-stream and entered the mouth of the Illinois. Marquette gave attention to his work as a missionary among the Indians, while Joliet looked after matters of trade, giving out hatchets and trinkets in exchange for articles which he secured from the Indians.

La Salle. — In 1662 La Salle explored the Mississippi River to its mouth and in formal way took possession of the entire country in the name of France. Thus, for the first time, a definite claim was made to this territory which La Salle called Louisiana in honor of his king. In the fifty years which followed many attempts were made at settlements, but always with a view to mining gold and silver. In 1705 a prospecting party of French ascended the Missouri River to the present site of Kansas City. At a still later date an expedition was led into the interior of the state from the southeast, over the Ozark Mountains to the Osage River; and then on to the west for a distance of about one hundred miles. Most of their time was taken up, however, with hunting and fishing and mining.

Settlement. — It was not until 1735 that a permanent settlement was effected in this territory. This was at Ste. Genevieve, within three miles of the present town of that name, some sixty miles to the south of St. Louis. The people traded with the Indians and learned to mine the lead they found there in such abundance. After preparing it for the market, the lead was shipped down the river in boats to New Orleans and thence to France.

St. Louis. — St. Louis was the second important permanent settlement made on Missouri soil. Pierre Laclède, a shrewd business man, was the founder of the place. He secured a monopoly of the fur trade with the Indians, explored the region about the Mississippi, cleared away the timber for the town, and established

a lucrative business. This was about 1764. Here was the beginning of the largest city in the state.

St. Charles. — About this time, probably later (1769), St. Charles was founded. The meaning of the original name was "The Village of the Hills." It was the seat of the first forts that were built for the protection of the people against the attacks of the savages. Many Indian wars were fought here, and numerous massacres occurred in the place.

Change of Ownership. — It was in 1763 that France ratified a treaty by which she surrendered her title to Missouri, and Spain acquired ownership of the territory, while England got possession on the east of the Mississippi. Many of the French on the east side of the river, desiring to escape English rule, crossed over into Missouri, thus greatly increasing the number of French inhabitants under Spanish rule. Spanish rule in Missouri was very satisfactory to the people. The lands were systematically surveyed, grants of land previously made were confirmed, and confidence was greatly strengthened. The people were not burdened with taxes, and the spirit of freedom pervaded the colonies. By secret negotiations, however, about the year 1800, France came again into possession of the country. In recent years the number of inhabitants had been constantly increasing. New colonies had been established, and these had made rapid growth, so that by 1800 the entire population of Missouri exceeded six thousand people. In less than four years from this time, when the transfer from France to the United States was made, the number had increased to more than nine thousand.

Louisiana Purchase. — France held the territory for a comparatively short time. Several circumstances contributed most strongly to bring about a transfer of the territory to the United States: —

1. England was at war with Napoleon, and she was in a position to thwart any effort he might make to take possession of the territory in a definite way.

2. Napoleon needed all the forces at his command to operate on land, and he saw that he could not successfully oppose the movements of England.

3. He was also greatly in need of money to meet the expenses of the army.

4. In addition to these discouragements which confronted Napoleon, President Jefferson was protesting against France making any attempt to assume control of the territory.

Under such conditions as these, and being especially anxious to put the territory beyond the control of England, Napoleon offered to sell it to the United States. Terms were arranged, and the purchase was made in 1803 for the sum of fifteen million dollars. In 1804 the formal transfer was made to the United States, and nine hundred thousand square miles of territory were added to our domain.

Daniel Boone. — Daniel Boone, the great hunter and explorer of these early times, moved from Kentucky to Missouri in 1795 and settled in what is now Warren County. He did great service to his country by his explorations. Congress gave him one thousand acres of land in recognition of the services he had rendered. He died in 1820 in St. Charles County, about six miles from the Missouri River. After a period of twenty-five years his remains and those of his wife were taken back to Kentucky, where they were reinterred with pomp and ceremony.

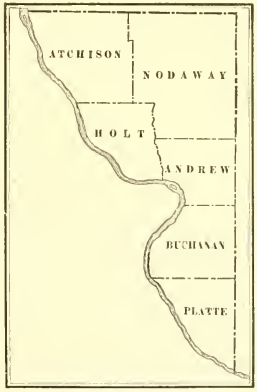


FIG. 4.
Platte Purchase.

The Platte Purchase. — Six counties constitute what is known as the Platte Purchase, a triangular corner of the state situated between the Missouri River and a line drawn from the mouth of the Kansas River due north to the Iowa border. This tract was ceded to the United States by the Sac, Fox, and Iowa Indians, and by an act of Congress in 1837 it became a part of the state of Missouri (Fig. 4).

Such movements as those discussed above — the discoveries, settlements, and purchases of large areas of country — tell the story of the geographical growth of a great section of the United States.

Life of the Pioneer. — The lot of the pioneer was not an easy one. In the first place the soil was in its primitive or wild state. The timbered regions were covered with natural forests, composed of hickory, elm, ash, oak, walnut, and maple. These lands were cleared off and fenced by the settlers and made ready for the crops. In the prairie country the tough sod was broken out by heavy teams; usually the ox team was in use. For a time there were no sawmills,

no factories of any kind. The dwellings were log houses, made of timbers taken from the forests, hewed flat with hand axes, and fitted together by saddle-notches. Hand-made clapboards were their shingles, and their doors were made out of rough boards, while the lock and hinges were of wood. Cook stoves were not in use, and farm machinery was of the crudest type.

Modern Ideas. — In later years modern methods have been introduced everywhere, — in the house, on the farm, and in the shop.

FIG. 5.
A Modern Farmhouse.

Labor-saving machinery is in general use, and old plans of work have passed away. We have modern plows, harrows, and wagons; and reapers, threshers, and planters are in common use. The log cabin has long since disappeared, and the substantially built dwelling, providing for every comfort and convenience, has taken its place (Fig. 5). Towns and cities have developed out of the needs of the people, and the great factory, provided with every form of machinery, does the work of a thousand men.

Expansion. — The history of the expansion of government in the state is an interesting one, but it is too lengthy for recital here. The first legislative body, known as the council, was composed of

one member from each of the five counties into which the state was divided. These counties were Cape Girardeau, New Madrid, St. Charles, Ste. Genevieve, and St. Louis. On August 10, 1821, Missouri was admitted as a state, with twenty-four counties. At the present time there are one hundred and fourteen counties and the city of St. Louis. The city of St. Louis is without county organization, but sustains to the state the same relations as a county.

Extent. — From the Mississippi River on the east to the Kansas line on the west it is 320 miles, and from the Iowa line on the north to the Arkansas line on the south it is 328 miles. The total area of the state is 69,415 square miles, 680 square miles being water surface.

PRACTICAL QUESTIONS. — (1) Give a short account of the dispute which arose in Congress over the question of slavery at the time of the admission of Missouri into the Union. (2) Who were the Confederate soldiers? The Federal soldiers? (3) Did Missouri secede from the Union? (4) Should the remains of Daniel Boone have been kept upon Missouri soil? (5) Trace the course of De Soto from Tampa Bay to Missouri and back to the place of his death and burial. Make a diagram of the route.

GENERAL GEOGRAPHICAL FEATURES OF THE STATE

Surface Divisions. — The surface of the state divides itself into two great sections, the *prairie section* and the *Ozark* or *elevated region*. The two are loosely separated by a line drawn from Lamar to Sedalia, and from Sedalia through Warrenton, and on to the river a few miles below St. Louis. On the east and south of this line is found the rougher and mountainous region of the state, and on the west and north of it is found the prairie section.

Prairie Region. — Most of the northern part of the state is a level prairie country, diversified with valleys and slightly elevated regions. Ridges and broken mounds break the monotony of the level stretches of the smoother country (Fig. 6). Where once native wild grasses covered thousands of acres we now find every product of field and meadow. With some exceptions the prairie section is well watered and contains highly cultivated agricultural lands. From the southern and southeastern border of this section the elevation gradually rises from six or eight hundred feet to an altitude of about eleven hundred feet in the northwestern part of the

state (Fig. 7). That portion which includes Hannibal and Louisiana is covered with bluffs and valleys, once covered with a fine quality of oak and elm timber. The southern part of the prairie section is especially well suited to the raising of a fine quality of winter wheat. The streams of the prairie section are fringed with timber, while the alluvial soils are among the richest and most productive. The lower

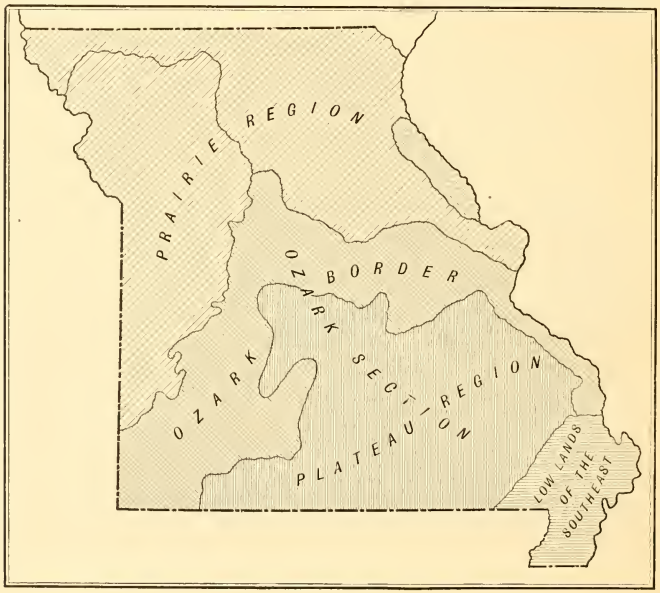


FIG. 6.
Principal Surface Divisions.

prairies are found in the eastern portion, while the higher prairies are found in the western part.

Ozark Region. — This region lies in the southern part of the state, almost entirely on the south side of the Missouri River. The altitude of this section is much higher than any other portion of the state, rising from eight hundred to seventeen hundred feet above the level of the sea. This is the rugged part of the state where a large number of hills, or a series of hills, is found, with many valleys, more or less abrupt. In many parts the valleys are narrow and

Relief Map of Missouri.

steep. The highest elevations are in Wright and Webster counties. Limestones, sandstones, and granites are found in different parts of the section, the limestone formation predominating. In the southern part of the state, including about eight counties, are large quantities of lands which were at one time worthless swamps. These have been thoroughly dried by a system of drainage, and they now produce immense crops of corn and cotton.

Fig. 7.
Scene in the Rolling Prairie in Cass County

Ozark Border. — Between the prairie and Ozark regions is what is termed the Ozark border. The extremes and variety of elevation of the two great divisions of the state are less marked here. (See Fig. 6.)

Drainage. — From what has been said the drainage of the state will be easily understood. Missouri has two of the largest rivers in the world. The Mississippi River touches the entire eastern border of the state and drains extensive areas of land. The Missouri washes the northwestern part of the state, turns eastward at Kansas City, runs across the state, and enters the Mississippi a few miles

north of the city of St. Louis, making a distance of more than six hundred and fifty miles.

Tributaries. — The Chariton, Grand, Platte, and Nodoway are the principal rivers which enter the Missouri River from the north. The Fox, Salt, Fabius, and Cuivre rivers of northeast Missouri flow into the Mississippi. The waters of the Nishnabotna, One Hundred and Two, Platte, Grand, and Chariton find their way into the Missouri from the north; while those of the Big Sniabar, Blue, Lamine, Osage, and Gasconade reach the Missouri from the south. The Des Pères and the Meramec, together with a large number of creeks, rising on the south of the Missouri, flow into the Mississippi; while the Castor, the Little, the St. Francis, and the Black rivers move southwardly into the Arkansas and thence into the Mississippi. Current River, Eleven Point, White River, and many smaller tributaries carry off the waters of the southern slope of the Ozark Hills. Elk and Spring rivers drain off the waters of the southwestern portion of the state.

Living Water. — Many very fine springs are found in the Ozark region of the state. Many of them are large enough and furnish force enough for the operation of mills and other factories. These large springs are numerous, especially in the southern counties, where, in some cases, ten million cubic feet of water is discharged each day. Throughout the prairie section of the state water is secured in great quantity for man and beast by boring, driving, and digging wells.

Caves. — In the rougher portions of the state, mostly south of the Missouri, there are many interesting caves. The stalagmites and stalactites found in the chambers and the lakes discovered in some of them are objects of profitable study. The Hannibal cave, not far from the Mississippi River, just south of Hannibal, Cliff cave, thirteen miles south of St. Louis, Fiede's cave, and others in Phelps County, and the saltpeter caves along the Gasconade River are among the most important. The saltpeter from numerous caves in the state was at one time the source of profit in the making of gunpowder.

Timber. — The timber products of Missouri surpass those of her neighbors, with the possible exception of Arkansas. Forests of yellow pine, cypress, gum, and poplar are found in the southeastern portion of the state. Immense plants for the manufacture of lumber have been established at favorable points in this section. Hardwoods

in large quantities are located in the southern part of the state and to a limited extent in other sections. Millions of feet are shipped over this and other states. Walnut, hickory, maple, and, in some places, cedar are worked in the uncleared areas of the state. Many of the most valuable species of timber are rapidly disappearing, among them being walnut and hard maple.

Building Stone. — In almost every section of the state good building stone is quarried, and in some parts large quantities are taken. Some qualities are shipped to other states. Limestone, of the hardest and most durable quality, and sandstone are in popular demand for building purposes. Red and gray granites, found in great quantities, are in demand for the paving of the streets of towns and cities. St. Francis, Iron, and Madison counties furnish a hard granite for building purposes and for the making of a good quality of monuments.

Gravel Pits. — In St. Louis and Franklin counties, and in some other sections, inexhaustible quantities of gravel and pebbles are found. These materials are valuable in the making of Macadam roads and streets.

Climate. — The climate of Missouri, taken in combination with the richness and variety of the soil found here, makes possible many varieties and grades of products. Missouri is in the central part of the Mississippi Valley, and hence is in the temperate zone. The two important elements of climate are temperature and moisture. A favorable showing is made when we look at these two elements. The yearly mean temperature of the state is fifty-four degrees, which is higher than most of the surrounding states. Periods of extremes of heat and cold are of short duration as a rule. During the winter months the temperature at times falls to eight or ten degrees below zero, but rarely lower, but the heat of summer seldom reaches ninety-five degrees. The genuine hot Kansas winds are never known in Missouri. The average rainfall for the state is slightly over thirty-nine inches, "ranging from thirty-four inches in the northwestern to forty-six inches in the southeastern counties." The distribution of rainfall through the seasons of the year is quite favorable to the growth and maturity of the crops.

QUESTIONS. — (1) How does a prairie section differ from a hill country? (2) Give an account of the New Madrid earthquake. (3) Name navigable rivers in the state other than the Missouri and the Mississippi. (4) What timbers are most in use at this time for the making of lumber?

THE SOILS OF THE STATE

Definition of Soil. — The soil is the upper part of the earth which contains the nutriment of plants, or is adapted to their support. There is a great variety of soils in Missouri, ranging from those of limited richness to those possessing the highest degree of fertility. (See Fig. 8.)

Alluvium. — Large bodies of alluvial soil are found along the Missouri and the Mississippi rivers and in more limited areas along

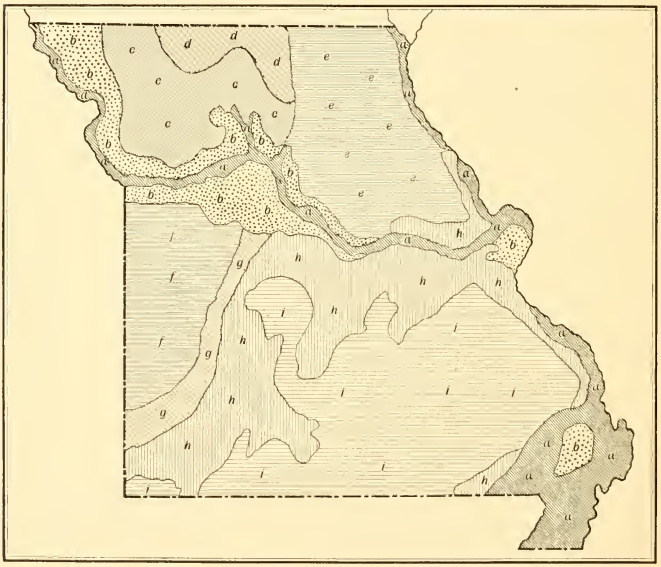


FIG. 8.

Principal Soils of the State.

a. Alluvium; *b*. Brown loam; *c*. Black prairie; *d*. Rolling prairie; *e*. Level prairie; *f*. Limestone shale clay; *g*. Sandy clay loam; *h*. Red limestone clay, some flint; *i*. Flinty limestone clay.

the smaller streams. It is rich and exceedingly productive, and varies in depth from six feet to two hundred. A large body of it is found in the southeastern corner of the state, comprising the whole of six counties and fractional parts of four or five others. Large

sections of this land have been reclaimed from overflow by the construction of a system of drainage ditches. Under state laws districts for assessment purposes were established and organized. The entire expense of the work, including the surveys of the land and the digging of the ditches, was assessed against the lands to be benefited, and all at a cost of from two to three dollars per acre.

Brown Loam. — This soil is from twenty to two hundred feet deep. An important body of it is found in the northwestern corner of the state, comprising about three-fourths of what is known as the Platte Purchase. (See Fig. 4.) The land is exceedingly rich, drains itself easily, and yet holds enough of moisture for the growing of fine crops. Corn, wheat, and oats, alfalfa and other kinds of hay, fruits and vegetables in great quantities and of fine quality, are produced by this soil. It is easily cultivated, and the surface is undulating and yet sufficiently level to be subject to cultivation.

Black Prairie. — This is the soil of the high prairie, lying principally to the west of the middle portion of north Missouri. It is very fertile, containing, as it does, a large amount of vegetable matter duly combined with other important ingredients. It ranges in depth from four to twelve feet, is black in color, and yields readily and easily to cultivation. It resists the drought and is not easily exhausted. Corn grows in great abundance, as do hay and grass, and stock raising is a leading industry in this section.

Rolling Prairie. — The soil of the uplands of the rolling prairie is dark in color, and ranges in depth from two to five feet. It is cultivated without difficulty, readily absorbs the warmth, and produces in good quantities. The water courses are plentiful and the surface is rolling. The valleys are similar to the black prairie section previously discussed.

Level Prairie. — In the eastern part of north Missouri is what may be termed the level prairie. The soil here is not so deep as other portions discussed above, neither is it so rich, but it is adapted to the raising of corn and other grains and the different kinds of hay. When properly cultivated, the soil retains its moisture for a long period. It does not easily lose its fertility from continuous cultivation, and readily responds to natural fertilizers.

Characteristics. — The chief characteristics of the five kinds of soil mentioned above may be summarized as follows: —

1. The entire area is comparatively level, with here and there higher and rougher patches of land.

2. The richness of the soil, decreasing in depth and fertility from west to east.

3. Its adaptability to successful farming and stock raising.

4. There is a very small amount of waste land in the entire area.

Limestone Loam. — This soil is found in a limited area in the western part of the state, including all of Cass County, nearly all of Johnson, about half of Jackson, Bates, and Henry, and a fraction of Lafayette counties. It is rich and of a dark color, it is easily crushed or pulverized, and produces wheat, corn, and flax, and many varieties of grass.

Sandy Loam. — This is a deep sandy soil and quite productive. It covers several of the best developed counties in the state, including Vernon and Barton and fractional parts of several counties on the east of them. Broom-corn, wheat, and corn, timothy and other grasses, grow easily and in abundance.

Red Limestone Clay. — This is the soil of the Ozark border (p. 8). It is of a flinty red mixture, and ranges from one to four feet in depth. The wheat of this region is of a high milling quality, having a plump grain or berry of an exceptional quality.

Flinty Limestone Clay. — The soil of the Ozark region as such is red or gray, and contains a large amount of flint. Hills and valleys prevail. This is "The Land of the Big Red Apple." Some of the largest orchards in the world are found in this section of the state. Peaches and small fruit are raised in great abundance. Large areas of timbered land are still found here, and are valuable for the quantity of lumber produced. Its agricultural resources have been developed to a limited degree only at this time.

Soil Improvement. — 1. "Deep breaking of the soil, frequent and intelligent tillage, — these are the foundations of soil restoration."

2. Proper drainage by ditches and terraces allows the circulation of the air through the soil, thus aiding the plant in the appropriation of suitable food.

3. Fertility is restored or greatly increased by the use of fertilizers, such as farm manures; the rotation of crops, occasionally plowing under clover, cowpeas, and other crops, and by the application of commercial fertilizers.

QUESTIONS AND SUGGESTIONS. — (1) It will be a profitable exercise for the children to make a cabinet collection of the soils of the community. (2) What is the nature of the richest soil of your neighborhood? (3) How may soil be enriched? (4) Name some of the best commercial fertilizers. (5) What is the effect upon soil, and especially upon crops, of a layer of compact clay beneath the surface of the ground? How may such soil be improved?

AGRICULTURE AND HORTICULTURE

Missouri is essentially an agricultural state, though manufacturing and mining are important industries. Many of her people are directly or indirectly interested in the cultivation of crops. Many of our staple foods are the products of our own soil. The annual surplus of our corn, wheat, and other products of the farm exceeds twenty-three million dollars.

FIG. 9.
Meadow and Cornfields in Saline County.

Corn. — One-eighth of the corn of the United States and one-tenth of the entire crop of the world is raised in Missouri. Few states average larger crops or produce a better quality of this cereal. The soil, the climate, and other conditions of the state make the raising of corn especially successful. The annual crop ranges in value close to one hundred million dollars. The length of the warm season, the limited number of excessively hot days and nights, the clear days of summer, and the frequency and distribution of rain, all add to the

success of the Missouri corn crop. While corn is raised in abundance in every county in the state, yet the prairie section (Fig. 9) constitutes the great corn area. Within recent years great advancement has been made in corn production by intelligent seed selection, coupled with right methods of cultivation. The quality of the grain has been improved, and the average per acre has been largely increased.

Wheat. — Wheat is our second farm crop. It is raised in good quantities in two-thirds of the counties of the state, but the banner counties are found along the Missouri River, in the southwestern part

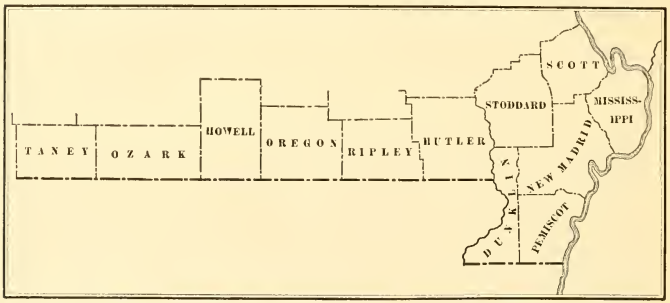


FIG. 10.
Principal Cotton Counties of Missouri.

of the state and along the Mississippi River, south of St. Louis. The annual yield ranges from sixty-two to seventy-five million bushels.

In 1906 the surplus flour and wheat combined, after supplying all the wants of the people, amounted to more than thirty-three million dollars.

Hay. — Missouri produces large quantities of hay each year. The prairie region (Fig. 6) is especially noted for this product. While the banner counties are frequently found in north Missouri, yet Vernon, Benton, and Bates produce very large quantities. The total value of the surplus hay of the state exceeds one hundred million dollars, most of it being baled and shipped to market over the railroads.

Oats. — Oats is a general crop in the state, Lewis, Audrain, and Jackson counties raising the larger amounts. More than nine hun-

dred thousand bushels are sold each year, over and above what is needed for local use.

Cotton. — While Missouri is not noted as a cotton state, yet cotton is raised in paying quantities in twelve of the southeast counties. (See Fig. 10.) The long warm summer season enables the cotton plant to mature before frost. In 1906 the total value of all cotton products raised in the state amounted to more than three and one-half million dollars.

Grasses. — Besides the pastures which follow the cutting of the meadows, special grasses have been introduced to the great profit of the farmer. A fine quality of blue grass, together with other varieties, is raised in north Missouri, and clover and orchard grass have been introduced with great profit in the upland region. Alfalfa has been planted with good success in certain parts of the state.

FIG. 11.
One of the Products of the Garden.

Other Crops. — Flax, rye, and broom-corn, clover and other varieties of grass seed, are raised with good profit. Potatoes are a good crop, the sweet and white varieties combined producing a surplus of more than a million two hundred thousand dollars. Tomatoes furnish a surplus of half a million dollars.

Gardening. — Near the cities and large towns truck farming is a profitable business. At St. Louis, Kansas City, St. Joseph, and other places the rich lands near the city are used for this purpose. (See Fig. 11.)

"The keystone of successful gardening is to stir the soil. Stir it often with four objects in view: —

1. To destroy the weeds.
2. To ventilate the ground.
3. To enrich the soil by the action of the air.
4. To retain the moisture by preventing its evaporation."

— *Agriculture for Beginners.*

Fruits. — Missouri raises large quantities and many varieties of fruit. Neatly trimmed and well-developed orchards are found in every county. For many years the northwest part of the state has

been noted for its large apple orchards that have annually attracted many buyers from other states. For some time the Ozark region has been recognized as the most successful fruit-growing section in the state. Its suitable soil and its favorable climate, together with the application of scientific principles, have combined to produce varieties and qualities of fruit scarcely attained elsewhere. The total surplus crop of fresh fruits in the state in 1906 was in excess of six and a quarter million dollars.

Fig. 12.
An Apple Orchard at Willow Spring.

Apples. — Apples develop and mature well throughout the state, and large quantities are raised in every county. Missouri apples are shipped to every part of the United States and to Germany, England, and other foreign countries. The surplus apple crop of 1906 was more than two million four hundred thousand dollars. (See Fig. 12.)

Peaches. — For some years, with rare exceptions, peaches have been confined largely to the southern part of the state. The soil of the Ozarks is specially adapted to their growth, and the south-

ern slope of the region protects the peach trees from the late frosts which are so fatal to the too early buds of other latitudes. (See Fig. 13.)

Berries. — Berries are third in importance to apples and peaches. The southwestern part of the state is known for the quality and quantity of its strawberries and other small fruits. The more extensive sections are planted near the shipping centers that the

FIG. 13.
Packing Peaches for Shipment at St. Elmo.

markets may be the more easily reached. Neosho, Sarcoxie, Pierce City, Monett, Marionville, and West Plains are shipping centers of this district. From one to two hundred dollars per acre is realized each year from the industry. The surplus strawberries of the state in 1906 amounted to more than one million seven hundred thousand dollars.

Grapes. — Grapes may be grown throughout the state. The Ozark region and the high lands along the rivers are especially well adapted to grape culture. Fine vineyards are frequently found

upon the hillsides. In many places wine making has become an important industry.

Melons. — In the southeastern part of the state is found one of the greatest melon regions in the country. Scott, Dunklin, and Mississippi counties, in the order named, are the largest producers. The soil of this section is especially adapted to the industry, and large quantities of watermelons and cantaloupes are sent to the markets each year. More than three million melons are shipped from Scott County alone each year.

Nurseries. — The largest nursery in the United States, and probably the largest in the world, is located at Louisiana, with good-sized branches in other parts of the country. Thousands of young trees are shipped from Missouri every year. A million-dollar investment is involved in this one nursery. Besides the sales made in our own country its salesmen are found in India, Germany, Austria, New Zealand, Korea, and China. (Locate these countries.)

QUESTIONS. — (1) What methods are now used for harvesting corn? Have you ever seen a corn cutter? (2) What are the principal uses we make of corn? (3) Trace the handling of wheat from the time it stands uncut in the field until it reaches the table. (4) Name the grasses from which we make hay. What is meant by curing hay? (5) How do we keep fruits and vegetables for winter use? Name the principal kinds.

THE MINERAL WEALTH OF THE STATE

The mineral resources of the state are extensive. *Coal*, *lead*, and *zinc* are the most important varieties, to say nothing of the more common metals and minerals. *Brick clay*, *fire clay*, *kaolin*, *terra cotta*, and *potter's clay* lie almost undisturbed in their original beds.

Coal. — Coal has been found in one-half of the counties of the state, in thirty-eight of which it is mined with profit at the present time. The coal area covers twenty-five thousand square miles of contiguous territory. Our coal is of the bituminous variety, except where, in a few cases, pocket deposits of cannel coal are found. The coal is largely consumed by our home markets because of the large amount of it mined in each of the surrounding states. (Name these states.) For some years the development of the mines has been quite rapid. Better facilities for mining coal, improved means of transportation, and the large number of new mines opened up in late years have greatly added to the amount and value of the coal inter-

ests. The amount of annual output at this time is between seven and eight million dollars. The great coal-producing counties at this date are Macon, Lafayette, and Adair, in the order named.

Uses. — The principal uses to which coal is put are three, viz.: —

1. The generation of steam for manufacturing and transportation purposes.

2. The production of heat for domestic purposes.

3. To a limited extent for the making of gas and coke.

Lead. — Lead has been mined in Missouri since 1720, the first discoveries of it having been made in the southeast part of the state. Renault and La Motte, under the authority of the French government, discovered Mine La Motte and mines about Potosi, and began to take out lead ore. However, "the only smelting of lead ores appears to have been done on log heaps, a wasteful process, much practiced even of late years." At a later date, under the authority of the Spanish government, the first regular shaft was sunk and a furnace erected. In 1819 forty-five mines were in operation in the state and eleven hundred persons were employed in them. Deep or underground mining did not begin in this country until the introduction of the diamond drill, a diamond-tipped rod or tube used in boring rock or other hard substances. (See Fig. 14.)

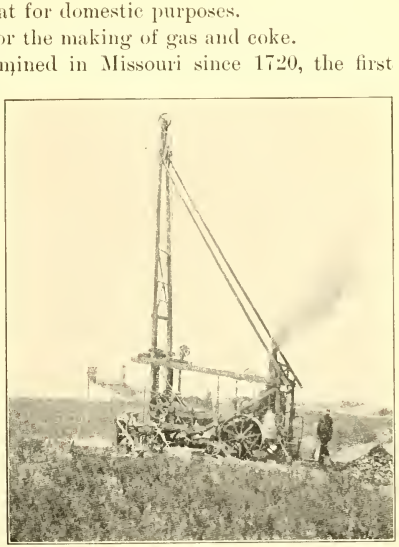


FIG. 14.
A Steam Drill at Work.

Galena is the chief ore from which lead is obtained. It is found in many parts of the United States, especially in Illinois, Missouri, Kansas, and Colorado.

Lead Areas. — There are three important lead districts in the state, the southwest, the middle district, and the southeast, the first and last named producing the larger amount of the product. The

middle district, located south and west of Jefferson City, lies principally in four counties, Moniteau, Cole, Miller, and Camden. A limited number of mines is now open, and these are not extensively worked at this time. The southwest district includes Jasper, Newton, and Lawrence as its best producing counties. This district is rich in lead and other minerals. The southeast district includes

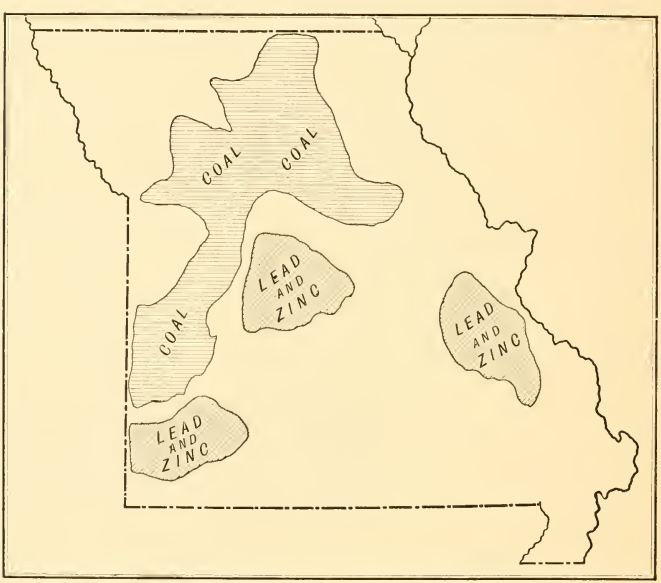


Fig. 15.
Lead, Zinc, and Coal.

St. François, Madison, Washington, Franklin, and Jefferson counties, the first named producing the larger quantities. (See Fig. 15.) Immense quantities of lead have been taken from the mines of this district, but according to the official reports of the state, Jasper County is first in the production, while St. François County is second.

Uses. — Lead is put to a number of practical uses. It is used in making linings for casks, cisterns, and other vessels. Its compounds are in extensive use as pigments for the coloring of paints and in

the manufacture of flint glass. These compounds are also used in type metal, solder, and pewter and in the manufacture of shot.

Zinc. — The largest zinc mines in the country are found in Missouri. Zinc is usually associated with lead in this state, except in the southeast district where it is seldom found. In some fifteen counties it is found in paying quantities. The industry began in 1867 at Potosi, Washington County, where a small smelter

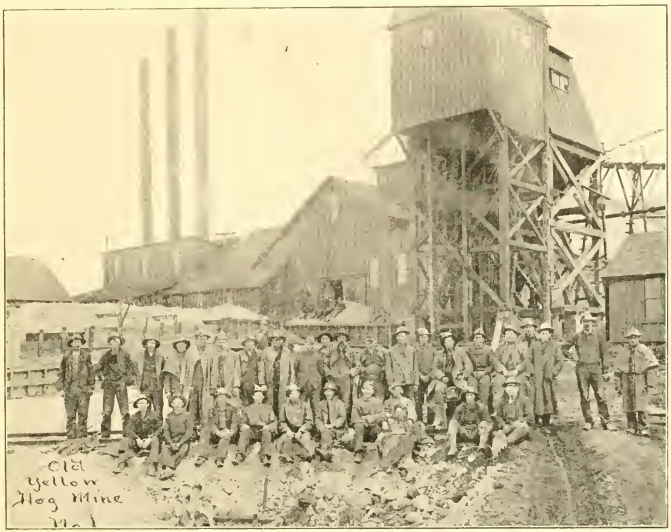


FIG. 16.
View of Zinc Mine near Joplin.

was erected at that time. Six years later the Joplin-Galena district began to ship zinc in paying quantities; now it is recognized as the largest zinc-producing area in the United States. (See Fig. 16.)

Uses. — Because of its cheapness zinc is extensively used in the making of ornamental castings, being easily painted, plated, or bronzed. It is also extensively used in the form of sheets for roofing, the making of cornices, signs, and vessels, and also in the making of galvanized iron.

Iron. — Much iron has been mined in Missouri in the past, but in recent years the industry has been reduced. The once-noted

mines, Iron Mountain, Pilot Knob, and others, have been exhausted, thus greatly reducing the output. The largest iron-producing counties are Crawford, St. François, and Howell. Since 1900 the output of the ore has been increasing again.

Suggestion. — Make a cabinet composed of the following minerals: —

(1) A specimen of coal from the different mines in the state. (See the coal dealers of your place.) (2) Lead in the rough ore and specimens of the lead as it is put on the market. (3) Specimens of zinc in the same forms. (4) Secure iron ore from mines and the iron as it comes from the smelter. (5) All specimens should be properly labeled and classified.

LIVE STOCK AND POULTRY

The live stock interests of the state are extensive. A favorable climate, a good soil intelligently cultivated, and easily accessible markets are important conditions which are ours. Only four states exceed Missouri in the value of her investments in this industry, viz., Texas, Illinois, Iowa, and Kansas. (Where are these states?) A million citizens of Missouri are vitally interested in the stock industry. Cattle, horses, mules, hogs, and sheep are the chief animals raised for profit. Every important breed is found in the state.

Fig. 17.
The Head of a Fine Herd in Cass County.

Cattle. — Cattle are valuable for milk, for butter, and for beef; that is, we have dairy cattle and beef cattle. Some cattle are especially good for dairy purposes, as the Jersey and the Holstein or Holstein-Friesian; and others are especially valuable for their beef qualities, as the Shorthorn, the Hereford, and others. Corn, hay, oats, corn fodder, wheat straw, and pasturage are the principal feeds used for cattle. The fat cattle of the state are found in large numbers in the best markets. (See Figs. 17 and 18.)

Dairying. — In recent years the dairying interests have developed rapidly. Greater attention has been given to dairy breeds of cattle, and to methods of making and caring for butter and cheese. Many fine dairy cows are found in the state, and large farms devoted to

these interests are located in different sections, especially near the large towns and cities where transportation facilities are good. Modern creameries for the manufacture of butter have been established and specially constructed barns for housing the cows have been erected. The dairy products shipped to the markets in 1906 amounted to more than three million nine hundred thousand dollars. In milk, butter, cream, and cheese Buchanan County was in the

FIG. 18.
A Herd of Herefords feeding in a Rich Valley in Jackson County.

lead, while St. Louis County was second in milk and cream, and Jackson County took third rank.

Horses. — Horses are used for saddle purposes, for driving, and for draft purposes. Each purpose is best met by certain breeds. We have the draft horses, light and heavy, the saddle horse, the coach horse, and the light driver. With the exception of Kentucky, "Missouri has more registered saddle horses than all the other states combined." (Name some of the breeds good for each use.) The state stands first in the number and quality of its mules. (See Fig. 19.)

Sheep. — The raising of sheep in Missouri is rapidly becoming a great industry. Large areas in the southern part of the state are especially well suited to it. Sheep are raised for their flesh and for their wool. (Name some of the leading breeds and state for what they are especially useful.)

FIG. 19.

A Car-load of Fine Missouri Mules.

Poultry. — Conditions are favorable to the raising of poultry, and immense quantities are raised each year. The climate favors it, suitable feed is abundant, and the industry has developed rapidly in the past few years. Chickens, turkeys, geese, and ducks are raised in large numbers, the surplus amount reaching an aggregate of more than twenty-two million dollars in 1906. The surplus eggs shipped to market during the same period were in excess of sixteen million dollars. The Wyandottes, Plymouth Rocks, Brahmas, Cochins, and Leghorns, each with their various varieties, are among the most popular breeds of chickens. Great improvement has resulted from the introduction of fine breeds of

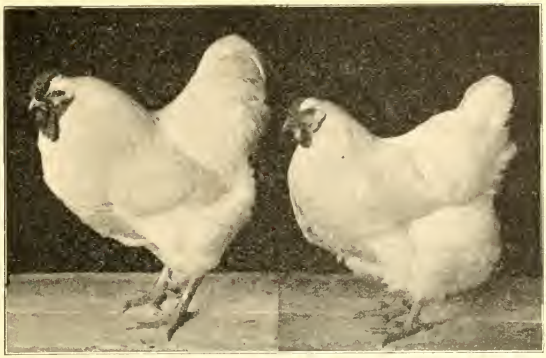


FIG. 20.
Fine Chickens from Jackson County.

fowls, and by intelligent selection and crossing on the part of farmers and fanciers." (See Fig. 20.)

STIMULATING QUESTIONS. — (1) Name the leading cattle markets to which Missouri shippers send their stock. (Give four.) (2) What are the railroads most used by shippers from your place to these markets? (3) For all purposes which would you rather own, an automobile or a good team of horses? Give your reasons. (4) Name the most popular gaits for a saddle horse. (5) Tell what may be seen on a poultry farm. (6) At what time of the year is the wool clipped from the sheep?

MANUFACTURING INTERESTS

Missouri ranks high in the manufacture of many of the important articles of commerce. In the building of street cars and in the manufacture of *tobacco* it leads the world, St. Louis being the largest center in these industries. The *printing and publishing* industry is highly developed. A large amount of *flour* of a high grade is manufactured, the large cities producing extensive quantities, while merchant mills are found throughout the wheat-raising districts. The *packing interests* hold a prominent place among the factory products, Kansas City holding second place in the country and St. Louis ranking fourth in the industry. Located as it is, in the corn belt, and being in close proximity to the grazing lands of the West, the state has easily taken this high rank. In recent years the products of the forest, such as *lumber*, *railroad ties*, and

wooden wares, have attracted increased attention as the timber of the southern part of the state has been utilized. In the manufacture of shoes large gains are made every year. St. Louis ranks first as a jobbing center, and half the shoes she sells are made in her own factories. *Shoe factories* have been established also in Kansas City and St. Joseph and in many of the progressive towns of the state. The manufacture of the "Missouri meerschaum," a cob pipe made

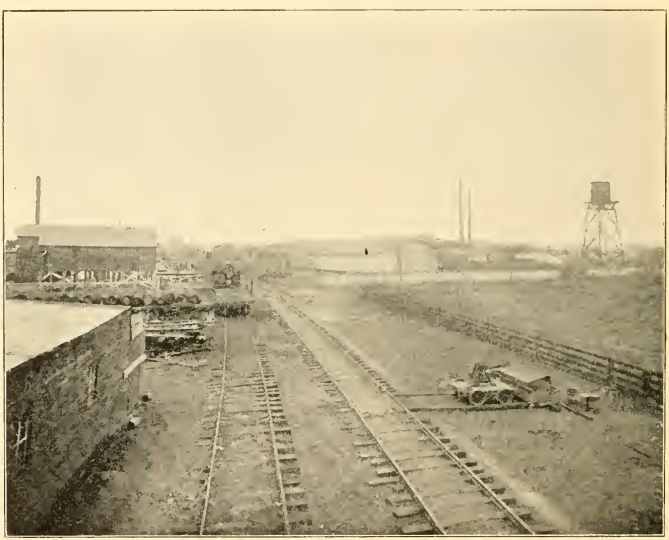


FIG. 21.
A View at Washington, including the Cob-pipe Factory.

from the cobs of corn grown especially for that use, has grown into an important industry in several counties, notably in Franklin and Gasconade counties and in a lesser degree in Pike and Warren counties. (See Fig. 21.) A pipe factory at St. Charles employs sixty men. The existence of large deposits of limestone rock has led to the establishment of extensive *cement factories* in different parts of the state, the largest, at this time, being located in Ralls County, a few miles south of Hannibal. The entire product of the factories of the commonwealth puts it in the lead of any other state west of the Mississippi, and gives it fifth rank among the states of the entire

country. Based upon the value of their products, St. Louis, Kansas City, St. Joseph, Springfield, Jefferson City, St. Charles, and Hannibal are the largest manufacturing centers.

Further consideration of this topic will be taken up in connection with the principal cities and towns of the state.

STIMULATING QUESTIONS. — (1) Make a list of raw materials produced in the state which are used in our factories. (2) Name some of the natural conditions which favor the success of a manufacturing enterprise. (3) Discuss fuel in its relation to factories. (4) What may be said concerning transportation facilities and freight rates? (5) Should a community patronize its local factories? (6) How does the manager differ from a workman in a department?

STATE GOVERNMENT

The Constitution. — The constitution of a state is its fundamental law. In it we find the powers, directions, and limitations of the departments of government and the duties and rights of citizens. Missouri has had three constitutions: the first was adopted in 1820, the second in 1865, and the third in 1875.

As in the government of the nation, so in the government of the state there are three departments, *legislative*, *executive*, and *judicial*. In Missouri the members of each of these are elected by the people for a definite term of service. Their duties are prescribed by the constitution, and the laws made in accordance therewith.

Legislative Department. — To the legislative department is committed the power to make the laws of the state. It is composed of the Senate and the House of Representatives. Each house is the judge of the election returns and qualifications of its own members. Bills may originate in either house, except that appropriation bills and impeachments must originate in the House, and the Senate tries all impeachments. This body has the power to appropriate money for the payment of the interest on the public debt; to set aside not less than two hundred and fifty thousand dollars per annum for the benefit of the sinking fund; to set aside money for the benefit of the public schools; to provide for the assessment and collection of the revenue; for the payment of the civil list; for the support of the eleemosynary institutions; and the payment of the expenses of the General Assembly.

Qualifications of Members. — A representative must be at least twenty-four years of age, while a senator must be at least thirty years old. Each must be a male citizen of the United States; the

representative must have been a qualified voter of the state two years, and the senator must have been a voter for three years; and each must have been an inhabitant of the county or district he represents, the first for one year and the second for three years; and each must have paid a state and county tax within one year of his election.

Apportionment. — No county has less than one representative; Buchanan County has four, Green two, Jackson six, Jasper three,

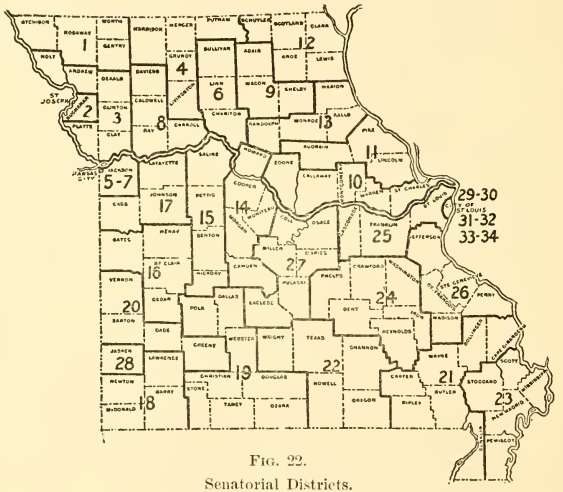


FIG. 22.
Senatorial Districts.

St. Louis two, the city of St. Louis sixteen, and all other counties one each. The Senate is composed of thirty-four members, elected for a term of four years, one from each of the senatorial districts into which the state has been divided. (See Fig. 22.)

Law Making. — To become a law a bill must be passed by each house of the Legislature, and receive the approval of the Governor; or if it fails in the latter, it must be passed over his veto, or objections, by a vote of two-thirds of the members of each house.

Congressmen. — At this time Missouri has sixteen members in the lower house of Congress, one from each of the districts, as shown in Figure 23. (Who is the representative from your congressional district? What counties compose your district?)

Executive Department. — The executive power of government in Missouri is vested in the Governor, Lieutenant-Governor, Secretary of State, Auditor, Treasurer, Attorney-General, and Superintendent of Public Schools. Each is elected by the people for a term of four years. Besides, there is a Board of Railroad Commissioners, elected by the people, and various appointive officers whose duties are prescribed by law.

Governor. — The Governor is the chief executive of the state.

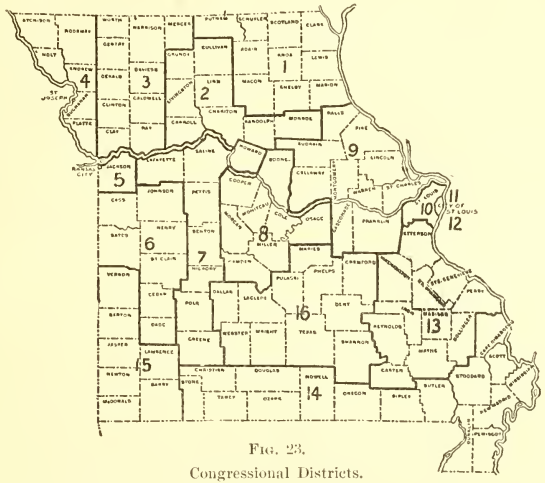


FIG. 23.
Congressional Districts.

He may grant reprieves, pardons, and commutations, issue commissions not otherwise provided for by law, and keep the Legislature informed concerning the needs of the state. He is commander-in-chief of the state militia. He must be at least thirty-five years of age, a male, and must have been ten years a citizen of the United States, and a resident of Missouri for seven years immediately preceding his election. In case of death or removal from office from any cause, the Lieutenant-Governor succeeds to the office.

Other State Officers. — Other state officers named in the constitution must be male citizens of the United States, twenty-five years of age, and they must have been residents of the state at least five years immediately preceding their election. The Secretary of State

keeps the official seal of the state, makes a record of the official acts of the Governor, receives the election returns, and performs the duties of Register of Lands. In his office are kept the papers, journals, and proceedings of both Houses of the Legislature. He authorizes the organization of private corporations, and has general supervision of banks and trust companies, which he must inspect once each year. The State Treasurer is, in general, the custodian of the moneys belonging to the state. These he pays out only on warrants properly drawn upon the treasury. The State Auditor keeps the account books of the state, including vouchers, bonds, and coupons. He keeps an account of the assessment and collection of revenues, and audits or settles accounts against the state. The Superintendent of Public Instruction has supervision of the school funds of the state, as to their care and distribution. He may visit schools, deliver educational lectures, consult with school boards, and grant teachers' certificates. There are some five executive boards, composed of state officers, whose duties pertain to the management of certain departments of government. These are penitentiary, equalization, public printing, education, and fund commissioners. There is also a number of officers who are appointed by the Governor, such as Adjutant-General, Warden of the Penitentiary, Superintendent of Insurance, Labor Commissioner, and inspectors of petroleum, tobacco, grain, and beer.

Judicial Department. — The judicial power is exercised by the courts of the state, including the Justices of the Peace, the County Courts, Municipal Corporation Courts, Probate Courts, Circuit Courts, Criminal Courts, Courts of Common Pleas, Courts of Appeals, and the Supreme Court. Court records in Missouri must be kept in the English language, arranged in systematic form, and accurately made in accordance with rules prescribed by the judge.

Juries. — There are two kinds of juries, a petit jury and a grand jury. The petit jury investigates both civil and criminal matters, and its sessions are public. The grand jury is composed of twelve men, and its sessions are held under a pledge of secrecy. The members of each jury are selected by lot by the County Court.

Circuit Courts. — Circuit judges are elected by the voters of their respective circuits for a term of six years. At least one judge is elected for each circuit. Buchanan and Jasper counties have two judges each, Jackson six, and the city of St. Louis twelve, making a total of fifty-one circuit judges in the entire state. The

General Assembly divides the state into circuits, the present number being thirty-three. (See Fig. 24.)

Higher Courts. — There are two Courts of Appeals, one at St. Louis and one at Kansas City. Each is composed of three judges who are elected by the people of their respective districts for a term of twelve years. The highest judicial tribunal in the state is the Supreme Court, composed of seven judges elected by the voters of the state for a term of ten years. Its sessions are held at Jefferson

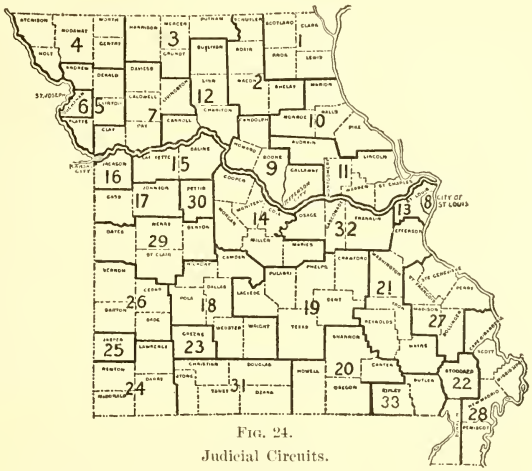


Fig. 24.
Judicial Circuits.

City. The judges of this court and those of the Courts of Appeals must be not less than thirty years of age, citizens of the United States, citizens of the state not less than five years immediately preceding their election, and they must be learned in the law.

Other Courts. — There are four Common Pleas Courts, located at Louisiana, Hannibal, Cape Girardeau, and Sturgeon. Criminal Courts have been established in Jackson, Buchanan, and Greene counties and in the Fifteenth Judicial Circuit.

The County. — The county is a very important unit of local government. County officers are largely charged with the administration of local laws as well as the enforcement of some of those which have a wider scope and application. The conduct of elections, the collection of revenues, and the enforcement of the criminal laws are

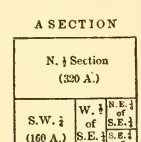
largely intrusted to county officials. The principal officers are: three County Judges, Assessor, Collector, Treasurer, Circuit Clerk, Recorder, Surveyor, Public Administrator, Probate Judge, and County School Commissioner or Superintendent. The Sheriff is charged with the enforcement of the peace laws of the county. He serves writs issued by the courts, including writs of replevin, attachments, and final processes issued by Justices of the Peace. It is his duty to arrest all disturbers of the peace. The Prosecuting Attorney defends the county in suits brought against it, and prosecutes civil and criminal cases involving the violation of the state law.

Townships. — The municipal township is a smaller unit than the county. It has but two officers, the Constable and the Justice of the Peace. The latter is the judicial officer of the township whose general duty it is to preserve the peace of the community. The duty of the Constable is to serve warrants, writs, and subpœnas and to perform other duties imposed by law.

A TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

A SECTION



There is another division known as the Congressional Township, used in marking land surveys. It is six miles square and contains thirty-six square miles or sections of six hundred forty acres.

Questions. — (1) Who is the present Governor of Missouri? Superintendent of Public Instruction? (2) Who is the Representative in Congress from your district? Representative in the General Assembly? Your State Senator? (3) Name the Senatorial, the Judicial, and the Congressional district in which you live. (4) Who makes and changes these districts when it becomes necessary to do so? (5) Make an outline of the organization of the city or town in which you live, or of the county seat of your county. (6) Why not allow counties to take stock in railroads and other corporations? (7) State reasons for giving the Governor the power to veto measures passed by the General Assembly.

STATE INSTITUTIONS

In matters of education the theory of the state has been that "a general diffusion of knowledge and intelligence is essential to the preservation of the rights and liberties of the people." A system of "free public schools for the gratuitous instruction of all persons between the ages of six and twenty years" has been organized and kept in successful operation for many years.

School Districts. — The counties have been divided into school districts, and school officers are selected in each at regular times designated by law. A school must be maintained in each for six months in each year, if forty cents on the hundred dollars assessed valuation, together with other school funds, shall be sufficient to pay the expenses thereof.

School Meeting. — The qualified voters of the district meet in annual session on the first Tuesday in April for the transaction of

FIG. 25.

Main Buildings of Normal School at Kirksville.

public business. They may determine the length of the school term in excess of six months, determine the changes in the boundary lines, if any are to be made, and appropriate money for library books. They also elect one member of the board of directors, who serves for three years. In the case of village school districts two members of the board are elected.

Directors. — The board of directors of the district school is composed of three members, while the board of a village school is composed of six members. The school board provides for the management of the school, including the employment of teachers and the purchase of all needed supplies.

School Moneys. — The principal permanent school funds are: (1) the interest-bearing certificates against the state; (2) a permanent county fund, derived from the sale of estrays and from fines

and penalties; (3) a township fund derived from the sale of school lands; and (4) in some districts there is a special fund, arising "from grant, gift, devise, or special legislation." The General Assembly must appropriate not less than one-fourth of the entire revenue to the support of the schools. One-third has been set apart for this use for many years. In addition to all of the funds mentioned above, each district is allowed to levy a tax of forty cents on the hundred dollars, which may be increased by a vote of the people to

FIG. 26.
Academic Hall, Cape Girardeau Normal School.

one dollar in cities and towns and to sixty-five cents in other districts.

High Schools. — The completion of the elementary school course requires about eight years. Following this comes the work of the high school, which in its full organization occupies about four years. There are some eighty schools in the state, including private and church institutions, whose graduates may enter the State University without examination, on presenting proper credentials. These are known as "accredited" schools.

Normal Schools. — There are now five State Normal Schools for the training of white teachers and one for the training of colored teachers. The schools for the whites are at Kirksville, Warrens-

burg, Cape Girardeau, Springfield, and Maryville, while the one for the colored teachers is at Jefferson City. (See Figs. 25, 26, 27.) Each of these schools is under the control of a board of regents composed of seven members, including the State Superintendent, who is *ex officio* a member of each board. Besides these institutions there is the Teachers' College at Columbia for the training of teachers for the schools of the state. Graduation from the full normal course carries with it a life certificate to teach in the state. These

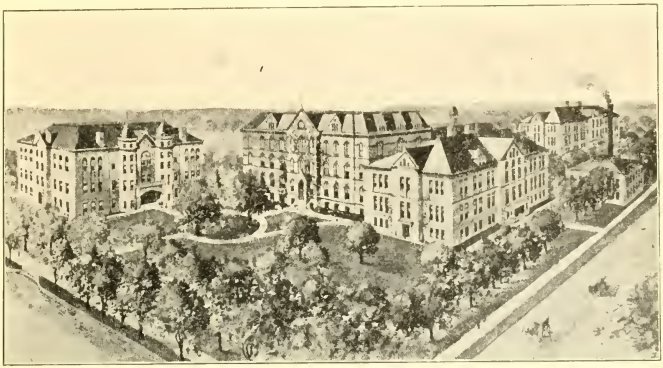


FIG. 27.
General View of Buildings, Warrensburg Normal School.

schools are supported by appropriations made from the treasury of the state by the General Assembly.

State University. — The University, located at Columbia, is the highest educational institution in the state. It was founded in 1839, the corner-stone of the main building was laid in 1840, and instruction began in April, 1841. It is under the control of a board of curators, nine in number, appointed by the Governor for a term of six years. The board appoints the president and professors of the institution, makes rules for the admission of pupils, and confers the usual university degrees. The School of Mines and Metallurgy, located at Rolla, gives special attention to mining and civil engineering, chemistry and metallurgy, and general science. The funds required for the management of the University and all of its departments come partly from the permanent endowment and partly from appropriations made by the General Assembly. (See Fig. 28.)

Care of the Blind. — The school for the education of the blind is in St. Louis. The location of the school has been changed recently, new dormitories erected, and many modern changes made. The general purpose of the institution is the education of blind persons who are of suitable mental and physical capacity. The age limit is from nine to twenty-five years. A person may have the benefit of the work for eight years, and in special cases the limit may be extended to ten years.

FIG. 28.

University of Missouri — Administration Building. One of thirty-three buildings.

Care of the Dumb. — This school is at Fulton. It is for the benefit of children between the ages of eight and twenty-one years who are too deaf to be instructed in the public schools. In addition to the literary branches, instruction is given in several of the trades, such as cooking, painting, harness making, gardening, sewing, and dressmaking. The attendance each year is nearly four hundred pupils. The control of the institution is vested in a board of managers, appointed by the Governor by the consent of the Senate.

Feeble-minded. — An institution has been established at Marshall for "the humane, curative, scientific, and economical treatment of the feeble-minded and epileptic." "It is built upon the cottage plan, and an infirmary, chapel, schoolhouse, and workshop" have been included in the plan. The board of control of five members

must include two women, and the term of office of each member is five years.

Soldiers' Homes. — The state supports two Soldiers' Homes. The one at Higginsville provides for the care of dependent Confederate soldiers and "their wives, children, and orphans," under certain rules and conditions. The one at St. James provides for Federal soldiers and for their wives and widows if over fifty years of age. Each Home is controlled by a board of managers, appointed by the Governor. Dormitories, hospitals, and other buildings have been erected at the expense of the state, and many conveniences provided for the comfort of the inmates.

Sanitarium. — A sanitarium has been established at Mt. Vernon, Lawrence County, for the treatment of consumption or tuberculosis in its early stages. Suitable buildings have been erected, and rules and regulations have been adopted for the admission of patients to the institution. Both free and private patients are admitted under definite conditions under each case. Only those in the incipient stages of the disease are allowed to enter the institution.

Hospitals. — Four hospitals for the insane have been established in the state, Nos. 1, 2, 3, and 4, located respectively at Fulton, St. Joseph, Nevada, and Farmington. The last named was opened in 1903, while the first one, located at Fulton, was opened in 1847. Dormitories, laundries, bakeries, water and light plants, carpenter shops, and other accessories have been provided. "Many of the patients find employment on the farm, in the gardens, and shops elsewhere about the institution." About one-third of the patients are discharged as cured, while about half as many more are greatly benefited by the treatment they receive.

Training Schools. — There are two training (reform) schools, one at Booneville for boys and the other one at Chillicothe for girls. In addition to the literary and scientific instruction given the boys they are also trained in a large number of the trades, such as tailoring, blacksmithing, painting, building, and farming. The girls' school has been built on the cottage plan, and liberal provision has been made for training in the useful arts.

Penitentiary. — The greatest penal institution in the state is the Penitentiary, located at Jefferson City. The first law looking to its establishment was passed in 1833, but the prison was not completed until 1836, when the first prisoner was received. The confinement, punishment, and reformation of criminals are the

important ends to be subserved by the institution. The Board of Prison Inspection is composed of the State Treasurer, the State Auditor, and the Attorney-General. The chief officer in control of the institution is the warden, who is appointed by the Governor for a term of four years.

STIMULATING QUESTIONS. — (1) What reasons can be assigned for state aid to the institutions mentioned in this section? (2) Does the state need additional institutions at this time? (3) Should the state supervise institutions not supported by public money? (4) Was it wise to make it possible for the Governor to sentence to life imprisonment instead of death in case of first degree murder? (5) Should there be a state parole system in this state?

TRANSPORTATION

Importance. — The effect of cheap transportation on the development of a community or state is very great. Products are valuable in proportion to their accessibility to markets. Because of a lack of transportation facilities, portions of Kansas once used corn for fuel. To cheapen the transportation of a product is to decrease the price to the buyer or to increase the profit to the seller. The improvement of the highways of transportation contributes greatly to this general result — a decrease in the expense of production.

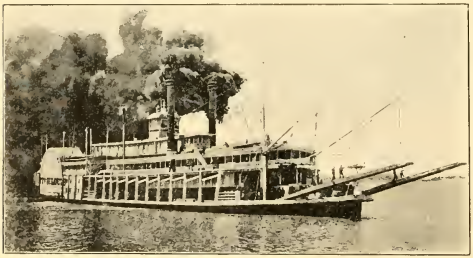


FIG. 29.
Mississippi River Steamer.

Waterways. — Because it is easier to move a certain "tonnage through water than over land," it follows that "water transportation is cheaper than land transportation." It is cheaper on the larger bodies of water than on the smaller ones, because, as a rule, the smaller waterways carry smaller vessels. River and canal transportation cost about one-half as much, on an average, as railroad transportation. "Transportation by water, though slower, is much cheaper than by land, owing to economy in motive power" (*Trotter*). The great waterways of the state are the Mississippi River, long a highway of traffic, and the Missouri River, largely neglected until

recently. (See Fig. 29.) Steamboat traffic on the Missouri River was renewed in 1906, and since then traffic companies have been organized, and steamers equipped and put into the trade with marked success. Appropriations have been made by Congress for the improvement of the stream by the removal of snags, sand bars, and other obstacles, and for the location of buoys and other signals. Certain smaller streams are navigable by small craft for limited distances. The Gasconade and the Osage rivers are examples.

Railroads. — Freight trains are faster and freight rates lower in this country than in any other. "Abundant, rapid, and cheap transportation has helped to make the United States the leading commercial nation" (*Adams*). Missouri has kept pace with her sister states in road building, until now she has more than seven thousand miles of railroad.

Supervision. — The operation of these roads is under the general supervision and inspection of the State Board of Railroad Commissioners. With three exceptions, every county in the state is reached by one or more railroads. By a study of the lines in the state (Fig. 1) it will be found that the larger number extend east and west. (What reasons can you offer for this fact? What part of the state has the largest number of roads? Why?)

Electric Roads. — Electric roads have been built in the counties having the larger cities, some of them extending many miles. St. Louis, Jackson, Buchanan, Jasper, and other counties are examples.

Highways. — State, county, and city authorities are now working together for the improvement of the roads of the state. A system of highways and cross roads has been projected to extend from Kansas City to St. Louis. Three main routes have been laid out: the Southern or Capital route, so named because it passes through Jefferson City; the Middle or College route, so named because it passes through a large number of college towns; and the Northern route. Auxiliary roads will be constructed to connect with these main thoroughfares.

Appropriations. — The following financial arrangement has been made by law for the support of the work: —

1. An appropriation of five hundred thousand dollars, on condition that counties contribute a like amount.

2. The war claim fund of four hundred seventy-four thousand, one hundred ninety-eight dollars has been set aside for building and improving roads and bridges.

3. The licenses from automobiles and chaffeurs are put into the road fund.

4. The proceeds of the sale of "future delivery" stamps must be devoted to this use.

The above sums were set apart as a beginning toward the development of this great system of road improvement.

Road Districts. — Under the "benefit assessment law" road districts are established by the County Court. The first Board of Commissioners is appointed by the court, but all subsequent boards are elected by the landowners, the election being determined by a majority. The expense of building or improving roads under this law is assessed against the road district, each owner paying an amount per acre based upon the distance of the land from the road.

Stimulating Questions. — (1) Is the two-cents-a-mile passenger rate fair to the railroads? (2) Are there reasons for increasing the penalty for injury to persons who travel on the railroads? (3) Should other transportation companies be held to an equal accountability with the railroads? (4) How do you account for the neglect of the waterways during the past few years? (5) Should cities and towns be assessed for the improvement of the public roads? (6) Should larger funds be expended for the purposes just mentioned? (7) Should the public highways be beautified by the planting of trees and shrubbery?

CITIES AND TOWNS OF THE STATE

Classification. — Upon the basis of population the General Assembly, under authority of the constitution, has divided cities and towns into certain classes. All cities having a given population may have a uniform organization, have the same powers, and be governed by the same rules and laws.

Villages. — All towns with less than five hundred inhabitants, unless they have been organized under special charters, are classed as villages.

Fourth Class. — Towns ranging in population from five hundred to three thousand are classed here.

Third Class. — Towns having three thousand and less than thirty thousand people.

Second Class. — Towns of thirty thousand inhabitants and less than one hundred thousand.

First Class. — All cities and towns of one hundred thousand or more inhabitants.

Some cities and towns have not taken advantage of these pro-

visions, but retain the organization they had before the adoption of the present constitution. St. Joseph is an organized city of the second class, and it is the only one. Twenty-seven cities and towns exist under special charters; thirty-four are organized as third class cities, and of villages and fourth class towns there are two hundred and thirty-two each.

St. Louis. — St. Louis is the chief city in Missouri and the fourth in size in the United States. It is located on the west bank of the Mississippi River and twenty-one miles south of the mouth of the Missouri. Its river frontage at present covers twenty miles, and the entire area of the city is about sixty-five square miles. From the time of the founding of the place by Laclède in 1764 until the present its progress has been steady and satisfactory.

Fur Trade. — Its early trade was largely in the furs of wild animals. Hunters and trappers made St. Louis the basis of their operations for many years while they pushed out farther into the wilder West, returning each year with larger amounts of furs and other products. After a time the surrounding country began a healthy growth, and local business conditions along substantial lines became fixed and definite. Following the sturdy French pioneer,

FIG. 30.
City Hall, St. Louis.

came the Americans from Virginia, Tennessee, and the two Carolinas. Later came the men from New England, with educational training and strongly imbued with the spirit of American freedom. By 1835 the population had reached eight thousand, and this number was doubled in five years.

Water Transportation. — In 1815 the first steamboat landed in the city, and four years later the first steamer ascended the Missouri River. A steady development of the trade of this section began within a short time of these two events. River traffic assumed large proportions by 1845. The business activity of St. Louis greatly increased, and the trade territory of the city extended widely, especially to the west and north. Large cargoes, and many of them, arrived on the river front, and the levee became a place of great business activity. The city became an important center for supply and distribution, and was soon recognized as a market for the products of the Mississippi Valley.

Railroad Development. — While the river traffic was at its height, about the year 1851, the first railroad to the west of St. Louis, the Pacific, began to build its tracks. Up to about 1875 great activity centered about St. Louis and reached many miles in all directions. River traffic had been one of the strongest transforming and inspiring forces. The territory had grown into one of great agricultural resources, and millions of tons of freight had been shipped out to the world. The period of railway expansion which followed was no less marked and definite than the growth of waterways had been.

The Civil War. — Of course the Civil War period aroused intense feeling and bitter rivalries, and many people suffered from the loss of property. The city suffered in all lines of business, and the country lost in all of its interests. After some years of depression, however, the old spirit of progress took hold of the people, old lines of activity were revived, and new enterprises were started.

Scheme and Charter. — In 1876 the new plan of government, the scheme and charter, was adopted for the management of city affairs. Its manufacturing interests have expanded until the city is now one of the most important centers in the country. Its water and light systems are among the best, and its street car transportation is not surpassed anywhere. Its public buildings and business houses, some of them of great size, are imposing and attractive.

Buildings. — The Union Trust Building, the Equitable, the Southern Hotel, the Planters, and the Jefferson are important exam-

ples. The Eads bridge, opened in 1874, and the Merchants' steel bridge, opened in 1890, are two of the finest structures in the country. (See Fig. 31.) There are about three hundred churches, representing nearly every variety of religious belief, while the city's parks and boulevards are expressive of the high degree of culture which her people possess. There are numerous hospitals, both private and public, whose construction is after the best plans.

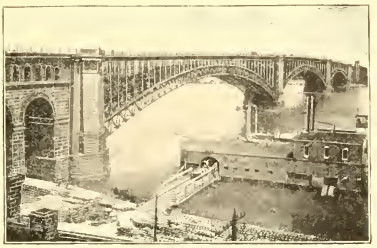


FIG. 31.
The Long Bridge across the Mississippi River at St. Louis.

Education.—The private schools of St. Louis are among the best of their kind. The Washington University, with several well-equipped departments, St. Louis University, Christian Brothers College, and others are among the noted institutions. Her libraries have been known for years for their completeness and their adaptation to the needs of a growing city. The public school system is one of the best in the country. It is known for its thorough organization and for the correctness of the principles upon which it is based. The population, as given by the last census returns, was 575,238; as estimated by the city directory for 1906–1907, 731,990.

Kansas City.—The central situation of Kansas City in a great trade territory gives it an advantage enjoyed by few cities of its size. She buys the products of a wide area, and she supplies the same area with the wares it needs. (What is meant by saying that Kansas City is the gateway to the West?) In the number of her railroads she is next to Chicago.

Coal.—The natural resources from which the city draws her raw materials and other supplies are extensive and near at hand. She gets coal from Missouri, Kansas, Arkansas, and Iowa. Some twenty coal-mining companies, with a total capital of ten million dollars, make their headquarters here. Beside these are wholesale companies operating one million dollars of capital not owned by Kansas City men. The coal area surrounds the city, being found within the city limits and at distances twenty, fifty, and one hundred miles away in three or four directions.

Lumber. — Kansas City ranks among the first as a lumber market, the sale of yellow pine probably leading in amount. Cypress is also handled in large amounts in the city. Large areas of timbered lands in Missouri, Arkansas, Texas, Louisiana, and Mississippi are bought up by the large dealers, and the raw material is manufactured for the wholesale and retail markets. Hardwood lumbers are coming into increasing demand in Kansas City, four large yards being engaged in that trade. The sash-and-door industry and similar

FIG. 32.
Missouri Wharf at Kansas City.

lines do an extensive business over a wide territory. More than one hundred companies, employing an estimated capital of forty millions, are now active in the lumber trade of the city. The Southwestern Lumbermen's Association, with a membership of more than sixteen thousand, has its headquarters in Kansas City.

Stock and Packing Interests. — These interests are the largest in the city, but one city in the country doing a larger amount of business, and that is Chicago. Meat packing, including all its departments, involves more labor, works more capital, furnishes more men with business, and draws supplies from a larger territory than any other in the city. The stock-yards once used but twenty-

six acres, but now two hundred acres are required. The output of the six packing houses of Kansas City, including those just across the line in Kansas, amounts to seventy-five million dollars each year. Located in the heart of the corn belt, and being within easy reach of the grazing lands, it is not surprising that the packing interests should develop into large proportions. Probably one-third of the cattle of the United States is within easy shipping distance of Kansas City.

FIG. 33.
In the Retail Section of Kansas City.

Implements. — Kansas City leads in the distribution of implements and vehicles. A large territory on the west of the Mississippi River, rich in soil and agricultural interests of every kind, looks to Kansas City for its supplies in this line. The annual sale of wagons, buggies, and all kinds of farming implements amounts to twenty-five million dollars.

Manufacturing. — The city is growing rapidly in manufacturing interests. In many lines marked growth has been made, especially in dry-goods, hats, caps, boots and shoes, millinery, groceries, machinery supplies, and building materials. The Manufacturers' Associa-

tion now has a membership of more than four hundred. The large industrial growth of the surrounding territory is indicative of the increased interests within the city itself.

Boulevards. — Though incomplete, the parks and boulevards have added greatly to the attractiveness of the city. They are the wonder of the stranger and the pride of the citizen.

Schools. — No city has a better system of schools. The management of the system is vested in a non-partisan board of six members, representative business and professional men. The plan of the system is broad and liberal, the aim being to give the children a genuine culture free from all religious and political bias. The buildings are modern and attractive, nothing being wasted for mere show and everything included for thorough, practical work. The course of study is constructed to secure the broadest culture and to impart the largest amount of knowledge and information. Emphasis is placed upon what are termed essential studies, that is, those which lay stress upon the practical phases of education. There are sixty-two schools in the city, requiring the services of eight hundred forty-two teachers. Population, 163,762; estimated now, 328,065.

New Life. — For some years a transformation has been under way. Old buildings have been torn down, and new ones have been erected in their stead. Modern and imposing wholesale houses have been built, office buildings of the best construction have been erected, and a large number of modern buildings for the retail trade have gone up on the principal streets.

St. Joseph. — St. Joseph is the metropolis of the Platte Purchase (Fig. 4) and the third city in size in the state. As an organized town it dates from 1843. Emigrants to California from Missouri and the surrounding country made St. Joseph their outfitting point, but its population three years later was less than one thousand people.

Advantages. — The city is located in a fine section of the country, especially strong in agricultural wealth, and fortunate in its position for the development of a substantial trade. Its citizens are public spirited and aggressive. Large numbers of them own the houses in which they live and have started in business with the intention of building a great commercial city. "St. Joseph is the wealthiest city of like population in the United States."

Business. — St. Joseph ranks fourth among the cities of the country as a dry-goods market. This business alone uses three millions

of capital, employs over two hundred traveling salesmen, and makes an annual sale of goods of twenty million dollars. Wholesale groceries, hardware, boots and shoes, hats and caps, and other products of various kinds bring the total sum up to a large amount. The wholesale millinery trade is another large interest, reaching an extensive territory, and giving employment to a large number of men and women. The jobbing trade in all of its details is one of the largest in the country for a city of its size.

FIG. 34.
Sheep from the Pastures ready for the Market.

Manufacturing. — There has been great growth and development along this line within the last few years. Transportation facilities are good, and the supply of raw materials is extensive and easily reached. Factories for the making of robes, flannels, and blankets, and two large factories for making duck and denim are located here. Four thousand operatives are employed in the making of woolen goods alone. Plow factories and pump companies do an extensive business and much saddlery and tinware are made. The manufacture of wagons, buggies, and carriages form prosperous businesses, while foundries and machine shops employ large numbers of men.

Packing Industry. — The packing interests are the most extensive in the city. The facilities for handling stock of every kind are adequate and thoroughly modern in every detail. Four of the largest packing firms in the country do business in the place, and their products are shipped to all countries that use American meats. The stock-yards are modern "in construction, sanitation, and facilities." Their capacity is fifteen thousand cattle, twenty thousand hogs, and fifteen thousand sheep. In five years the receipts of live stock have increased more than one hundred per cent, while the packing houses made an increase of eighty-four per cent in the same time. The city now ranks fourth in the country as a packing center. (See Fig. 34.)

Schools. — There are good private and church schools in the city that receive a liberal patronage. The public schools rank high among the schools of the large cities. There are thirty-five well-organized schools, requiring the services of two hundred seventy-eight teachers. The ideals of the school board are high, and it is striving to reach them, while the people are willing to be taxed to meet all the expense. Population, 102,979; estimated at this time, 120,000.

Joplin. — The genuine history of Joplin began in 1870 when a large amount of mineral was discovered. Mining became an absorbing interest from that date, and the place has made a steady growth to the present day. Public confidence in the place has increased, and business interests have expanded and multiplied. After mining lead for a few years it was found that zinc ore was much more valuable than lead. There are two kinds of zinc which command good prices on the market, the sulphide of zinc, called jack, and the silicate of zinc. The first is shipped away to zinc factories where fuel is plentiful, while the silicate is made into zinc-white, which is used in the making of paint. About one-seventh of the mineral taken from the mines of this district is lead, and this is manufactured into white lead, from which a superior quality of paint is made. Of the output of the zinc of the United States, four-fifths of it is taken from the mines of the Joplin district. There are smelters, foundries, machine shops, boiler and white lead works. The output of the mines ranges close to three million dollars, while the product of the entire Joplin district is three times that amount. (See Fig. 35.) The city is reached by four railway systems with forty passenger trains a day and four hundred freight cars each week. Its electric

car lines reach the adjoining towns and cities and the important mining camps. Its banks, schools, and churches have kept up with its growth in other lines. Population, 26,023; estimated at the present time, 32,000.

Springfield.—The rapid and substantial growth of Springfield began in 1870, upon the building of its first railroad, though its history dates from 1830. It is a city of good homes, some four hundred of which were built in one year. It is in a high country whose

FIG. 35.
View of Zinc Mines at Joplin.

health conditions are good, including climate, pure water, and proper drainage. The surrounding country produces an abundance of fruits and vegetables, while the agricultural lands supply the demands for grains and grasses. Fruit raising is a leading industry of the Ozark region, and Springfield is an important center for the distribution of its products. Apples by the train loads are shipped throughout the United States to the east and into European cities. The city does a wholesale business of ten million dollars each year, involving the capital and labor of twenty-four firms. More than twenty firms are engaged in manufacturing, with an output of seventeen and one-half million dollars. The public schools are among the best in the southern part of the state, while Drury College is among the high class institutions of the state. State

Normal School No. 4, with a modern course of study and a trained corps of teachers, is located here. Springfield has cotton and woolen factories, flour mills, wagon factories, and the railroad machine shops of the Frisco system. As a railroad center it is amply supplied with transportation facilities. Population, 23,267; estimated at this time, 35,000.

Sedalia. — Here is one of the richest agricultural regions in the state, much of it a fertile undulating prairie. The city, now covering six square miles, was incorporated in 1864. It has eighty miles of streets and boulevards, planted with trees in an artistic style. It has the county courthouse, costing one hundred thousand dollars, and a forty thousand dollar city hall, both substantial and artistic buildings. There are three electric plants for light and power, two telephone systems, and four electric street car lines which radiate from the center of the business section. There are three trunk railroad systems with several important branch roads, making Sedalia an important railroad center for a large section of the state. The coach, repair, and general shops of these roads, located here, give employment to two thousand men. Thirty firms are in the wholesale business, and about the same number are engaged in manufacturing. The George R. Smith College is an endowed institution for the education of the colored people. There are also two business colleges which have a large attendance. The public schools of the city are well organized, and they are popular with the people. Population, 15,231; estimated at this time, 21,000.

FIG. 36.
Avery's Bluff, Noel, Mo.

Hannibal. — Here is a substantial city located on the west

bank of the Mississippi River. In the surrounding counties is a very fertile country especially adapted to the raising of corn, wheat, and oats. The milling business early became an important industry because of the large surplus of very fine wheat raised in that locality. Many gravel roads are found in these counties, made in answer to the demands of progressive farming communities. Most of the city overlooks the river, its situation being favorable to perfect drainage and aiding greatly in the making of good streets. The city is fortunate in having water transportation in addition to the five railroads which reach in as many directions. (Why?) Boats ply the river to the north and south of the city, and reach all the cities and towns between St. Paul and New Orleans. There are more than one hundred factories in Hannibal besides the large railroad shops. In addition to flour, boots and shoes, cigars, lime, and cement are prominent among the articles manufactured. The largest Portland cement factory in the world is located just south of the city limits. Her libraries, hospitals, churches, and schools are modern and in keeping with her other institutions. Population, 12,780; estimated at this time, 18,500.

Jefferson City. — Jefferson City, the capital of the state, is located in Cole County, on the south bank of the Missouri River. The state capitol, the penitentiary, and the supreme court are located here. Large manufacturing plants turn out many products for the markets. Ten thousand pairs of shoes is the daily output of five factories. The largest saddle-tree factory in the world is found here, while large quantities of overalls, wine, brick, and flour are also manufactured. The General Assembly meets here every two years to make laws for the people. The state law library, kept here, is one of the finest in the country, and lawyers from all over the state consult its volumes. By act of Congress in 1820 Missouri was authorized to organize as a state; the present site of the capitol was selected in 1821, and the capitol building was completed in 1826. The early sessions of the Legislature, until the capitol was completed, were held at St. Charles. Population, 9,664; estimated at this time, 13,342.

Carthage. — This is a city of great natural and artistic beauty. Handsome residences, fine boulevards, pretty lawns and parks, are found on every side. It is termed "the most beautiful city of its size in America." The altitude is high, the air and water pure, and the drainage good. It is in the great lead and zinc district, some of

the largest deposits of mineral being found at this place. Twenty producing mines are within a short distance of Carthage. Perhaps its most important product is building stone, a white limestone of superior quality and beauty. Large quantities of it are used in different parts of the country for building, trimming, making of monuments, and for paving purposes. It has four lines of railroad connecting it with the largest markets of this and other states. Cheap and rapid transit by electric lines connects it with the nearest towns. Machine shops and wagon factories, factories for making mattresses and bed-springs, together with furniture and canning businesses, give employment to a large number of men. The system of public schools is one of the best, including six ward schools and a first class high school. Population, 9,416; estimated at present, 14,500.

Webb City. — This is another good town in the midst of the mining district of southwest Missouri. Mining at this place began in a systematic way in 1877, and good quantities of mineral have been shipped out since. It is a modern city, having water, sewerage, electric light systems, and a fire department. Lead and zinc are found near the surface of the earth, and the mining of these minerals is carried on at small expense. A good white limestone for building purposes is found in good quantities. Population, 9,201; estimated at this time, 14,500.

Moberly is the chief city in Randolph County, located in a beautiful level prairie. It is centrally located for business, being surrounded by a large coal producing area. Two important railroad systems, with several branches, cross at this point. The city has several manufacturing plants besides the railroad repair shops. It is surrounded by an excellent country. Population, 8,012; estimated at this time, 12,000.

St. Charles is the county seat of St. Charles County. Extensive car works are located here, and they do a very large business. The city stands on the Missouri River, and in addition two trunk-line railroads pass through the place. (What are they?) Large quantities of tobacco are also manufactured. Population, 7,982; estimated at present, 11,000.

Nevada is not far from the western line of the state in the midst of a good agricultural community. It has two trunk-line railroads, the Missouri, Kansas and Texas, and the Missouri Pacific, and several branch lines. There is a candy factory, a foundry, and machine

shops, a large flouring mill, and a zinc smelter. One of the State Hospitals for the Insane is located here. Its public school system is one of the best outside the large cities. Population, 7,461.

Independence, the county seat of Jackson County, is ten miles east of Kansas City. Besides the railroads there is an electric line that connects it with Kansas City. It is a center of many fine rock roads, which add much to the business interests of the place, by furnishing easy means of transportation from the country to the city. There are several important manufacturing plants in the town. Population, 6,964.

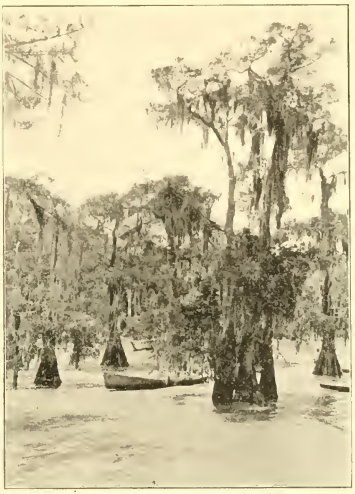


FIG. 37.
In the Cypress Swamps in Southeast Missouri.

Chillicothe is the county seat of Livingston County. It has three trunk lines of railroad which reach a fine agricultural region. Stock raising and general farming predominate, large quantities of fine cattle being raised, especially Herefords, Shorthorns, and Galloways. Chillicothe is an important market for mules and horses. The Industrial School for Girls is located here, also the Chillicothe Normal School, a private institution for the training of teachers. Population, 6,905.

Aurora is a vigorous mining town in Lawrence County. It has waterworks, gas and electric lights. It is in the fruit-growing section of the state, and a large amount of apples and small fruit is raised each year. Lead and zinc are found in paying quantities in the vicinity. The streets are paved with gravel. Population, 6,191.

Kirksville, the county seat of Adair County, has two railroads, one extending east and west and the other north and south. The making of ax handles, wagons, and buggies form special industries. The city is surrounded by prairie land with the exception of the section to the west. Grain, hay, and fruit are important products

of the farms. The First District Normal School is located in this town. Population, 6,966.

Columbia, the county seat of Boone County, is near the center of the state. It is in a rich country devoted to stock raising and general agriculture. Two academies, two female colleges, a Bible college, and the University of Missouri are located in the place. While no main line railroad enters the town, there are two spurs or branches. The town is the greatest educational center in the state. Population, 5,651.

FIG. 38.
A Beautiful Scene among the Many in the Southern Part of the State.

De Soto is forty-three miles south of St. Louis on the Iron Mountain Railroad. It has an agricultural implement factory, makes large quantities of flour, and has the repair railroad shops. Population, 5,611.

Brookfield is an important town in Linn County, halfway between Hannibal and St. Joseph. Cattle and corn are important products, and horses and mules contribute large amounts to the annual surplus of the country. It is in the coal area, and many carloads of coal are shipped in addition to the quantities consumed at home. The town has good railroad facilities. Population, 5,484.

Trenton is one of the best towns in the northern part of the state. It is the seat of government of Grundy County. It has two good railroads, the Chicago, Rock Island and Pacific, and the Quincy, Omaha and Kansas City. It has car shops, a canning factory, and flour and corn-meal mills. Coal of good quality and in large amounts is mined in the immediate locality, the vein being eighteen inches in thickness. Population, 5,396.

Louisiana is a progressive town in Pike County, on the Missis-

sippi River. A sash-and-door plant, a pearl button factory, lime works, and an extensive cement plant are among the industries of the place. The soil of the surrounding country is very rich, and large amounts of farm products are raised. Very large nursery interests are found here also. Population, 5,131.

Mexico, the county seat of Audrain County, is located on two railroads. (Name them.) It has good business interests and is located in a fine farming community. Corn, wheat, and oats are important farm products, while cattle and fine horses are extensively raised for the markets. The public schools are among the best in the state. Population, 5,099.

Marshall is the county seat of Saline County, one of the richest counties in the state. It is in a wheat-raising section, and the manufacture of flour is a large industry in the place. The Missouri Valley College and the Colony for the Feeble-minded are both here, and both are well equipped for their work. The Missouri Pacific and the Chicago and Alton railroads pass through the place. Population, 5,086.

Clinton, the county seat of Henry County, is in a very pretty country. The flour-mill interests are large, as the town is in a good wheat section. Stock and agricultural interests are also very large. Fine cattle and fine horses receive a large amount of attention. One of the largest tile works in the country is in Clinton. Transportation facilities are good, there being three railroads through the place. Population, 5,061.

QUESTIONS. — (1) What are the manufacturing plants in your town or in the town nearest your home? What are the forces which led to their establishment? (2) Name three services performed for the people by the city or town. (3) Name the conditions which contributed most largely to the growth of each of the large cities in the state. (4) What reasons can be assigned for the location of so many large towns in southwest Missouri? (5) Can any explanation be given of the fact that the three large cities of the state are located on the large rivers?

VALUE OF SURPLUS PRODUCTS BY COUNTIES, 1906

County	Value	County	Value
Adair	$ 1,779,970	Livingston	$ 2,304,394
Andrew	2,295,740	McDonald	904,350
Atchison	2,650,773	Macon	3,961,135
Audrain	2,823,355	Madison	1,763,608
Barry	1,468,928	Maries	576,230
Barton	2,029,376	Marion	2,334,583
Bates	3,721,558	Mercer	1,091,400
Benton	1,056,765	Miller	603,119
Bollinger	696,451	Mississippi	2,956,298
Boone	3,876,942	Moniteau	1,389,591
Buchanan	5,326,108	Monroe	2,721,147
Butler	2,122,430	Montgomery	1,857,977
Caldwell	3,050,714	Morgan	795,191
Callaway	2,382,650	New Madrid	3,469,915
Camden	646,160	Newton	3,419,015
Cape Girardeau	3,295,236	Nodaway	5,024,236
Carroll	4,237,214	Oregon	560,105
Carter	991,185	Osage	1,301,024
Cass	3,862,776	Ozark	551,572
Cedar	907,576	Pemiscot	2,904,409
Chariton	2,519,345	Perry	1,430,431
Christian	1,146,820	Pettis	5,167,735
Clark	1,835,282	Phelps	838,019
Clay	2,987,536	Pike	4,136,058
Clinton	2,862,342	Platte	3,399,580
Cole	2,318,570	Polk	1,750,393
Cooper	2,914,633	Pulaski	856,757
Crawford	890,924	Putnam	1,498,425
Dade	1,033,898	Ralls	4,701,898
Dallas	662,679	Randolph	2,636,838
Daviess	2,166,920	Ray	3,019,958
DeKalb	1,854,259	Reynolds	1,209,236
Dent	1,266,186	Ripley	771,461
Douglas	789,371	St. Charles	2,537,515
Dunklin	5,689,007	St. Clair	1,177,918
Franklin	2,809,098	St. François	11,151,240
Gasconade	1,539,484	Ste. Genevieve	1,120,562
Gentry	2,607,523	St. Louis	6,681,106
Greene	6,490,782	Saline	6,928,076
Grundy	1,735,787	Schuyler	1,704,805
Harrison	2,516,099	Scotland	1,153,851
Henry	4,779,929	Scott	3,982,905
Hickory	551,391	Shannon	709,337
Holt	2,741,602	Shelby	2,709,151
Howard	1,690,172	Stoddard	3,080,253
Howell	1,104,874	Stone	419,003
Iron	945,879	Sullivan	1,976,738
Jackson	9,544,967	Taney	700,880
Jasper	19,040,700	Texas	798,039
Jefferson	3,751,396	Vernon	3,736,473
Johnson	2,843,069	Warren	1,054,363
Knox	1,315,958	Washington	627,079
Laclede	844,606	Wayne	1,548,928
Lafayette	6,271,287	Webster	1,494,618
Lawrence	2,659,457	Worth	1,033,362
Lewis	2,716,478	Wright	773,681
Lincoln	1,749,506		
Linn	2,526,192	Total value, all counties	$ 291,921,946

STATISTICS OF COUNTIES

County, County Seat	Area	Pop.	County, County Seat	Area	Pop.
Adair, Kirksville	561	21,728	Livingston, Chillicothe	532	22,302
Andrew, Savannah	420	17,332	McDonald, Pineville	523	13,574
Atchison, Rockport	532	16,501	Macon, (same)	828	43,018
Audrain, Mexico	680	21,160	Madison, Fredericktown	495	9,975
Barry, Cassville	790	25,532	Maries, Vienna	530	9,616
Barton, Lamar	590	18,253	Marion, Palmyra	432	26,331
Bates, Butler	874	30,141	Mercer, Princeton	451	14,706
Benton, Warsaw	820	16,556	Miller, Tuscumbia	597	15,187
Bollinger, Marble Hill	610	14,650	Mississippi, Charleston	417	11,837
Boone, Columbia	680	28,642	Moniteau, California	410	15,931
Buchanan, St. Joseph	417	121,838	Monroe, Paris	666	19,716
Butler, Poplar Bluff	702	16,759	Montgomery, Danville	514	16,571
Caldwell, Kingston	426	16,656	Morgan, Versailles	612	12,175
Callaway, Fulton	830	25,984	New Madrid, (same)	654	11,280
Camden, Linncreek	702	13,113	Newton, Neosho	629	27,001
Cape Girardeau, (same)	570	24,315	Nodaway, Maryville	864	32,938
Carroll, Carrollton	686	26,455	Oregon, Alton	787	13,906
Carter, Van Buren	506	6,706	Osage, Linn	606	14,096
Cass, Harrisonville	712	23,636	Ozark, Gainesville	747	12,145
Cedar, Stockton	491	16,923	Pemiscot, Caruthersville	509	12,115
Chariton, Keytesville	740	26,826	Perry, Perryville	468	15,134
Christian, Ozark	551	16,939	Pettis, Sedalia	685	32,438
Clark, Kahoka	404	15,383	Phelps, Rolla	677	14,194
Clay, Liberty	407	18,903	Pike, Bowling Green	620	23,744
Clinton, Plattsburg	417	17,362	Platte, Platte City	410	16,193
Cole, Jefferson City	390	20,578	Polk, Bolivar	633	23,255
Cooper, Boonville	562	22,532	Pulaski, Waynesville	532	10,394
Crawford, Steelville	747	12,959	Putnam, Unionville	518	16,688
Dade, Greenfield	493	18,125	Ralls, New London	480	12,287
Dallas, Buffalo	530	13,903	Randolph, Huntsville	489	24,442
Daviess, Gallatin	531	21,325	Ray, Richmond	561	24,805
DeKalb, Mayville	420	14,418	Reynolds, Centerville	830	8,161
Dent, Salem	768	12,986	Ripley, Doniphan	623	13,186
Douglas, Ava	809	16,802	St. Charles, (same)	456	44,474
Dunklin, Kennett	531	21,706	St. Clair, Osceola	705	17,907
Franklin, Union	880	30,581	Ste. Genevieve, (same)	493	10,359
Gasconade, Hermann	518	12,298	St. François, Farmington	460	24,051
Gentry, Albany	492	20,554	St. Louis, Clayton	483	50,040
Green, Springfield	668	52,713	St. Louis city	61	555,238
Grundy, Trenton	432	17,832	Saline, Marshall	820	33,703
Harrison, Bethany	730	24,898	Schuyler, Lancaster	302	10,840
Henry, Clinton	740	28,055	Scotland, Memphis	453	13,232
Hickory, Hermitage	408	9,985	Scott, Benton	446	13,092
Holt, Oregon	460	17,083	Shannon, Eminence	993	11,247
Howard, Fayette	450	18,357	Shelby, Shelbyville	509	16,167
Howell, West Plain	907	1,834	Stoddard, Bloomfield	833	24,669
Iron, Graniteville	555	8,716	Stone, Galena	509	9,892
Jackson, Independence	607	195,193	Sullivan, Milan	648	20,282
Jasper, Carthage	632	84,018	Taney, Forsythe	648	10,127
Jefferson, Hillsboro	687	25,712	Texas, Houston	1157	19,192
Johnson, Warrensburg	835	27,843	Vernon, Nevada	839	31,619
Knox, Edina	504	13,479	Warren, Warrenton	410	9,919
Laclede, Lebanon	729	16,523	Washington, Potosi	744	14,263
Lafayette, Lexington	604	31,679	Wayne, Greenville	770	15,309
Lawrence, Mt. Vernon	612	31,662	Webster, Marshfield	579	16,640
Lewis, Monticello	500	16,724	Worth, Grant City	264	9,832
Lincoln, Troy	613	18,352	Wright, Hartville	673	17,519
Linn, Linneus	620	25,503			

CITIES WITH POPULATION BETWEEN 1,000 AND 3,000 AND THE RANK OF EACH IN THE STATE

Cities	Rank in State	Pop. 1900	Cities	Rank in State	Pop. 1900	Cities	Rank in State	Pop. 1900
Albany	66	2,025	Hamilton	83	1,804	Oronogo	63	2,073
Appleton	129	1,133	Harrisonville	79	1,844	Osceola	142	1,037
Ash Grove	141	1,039	Hermann	97	1,575	Pacific	118	1,213
Belton	147	1,005	Higbee	128	1,151	Palmyra	58	2,323
Bethany	62	2,093	Higginsville	44	2,791	Paris	111	1,397
Bevier	81	1,808	Holden	60	2,126	Pattonsburg	137	1,065
Bloomfield	104	1,475	Huntsville	82	1,805	Pierce City	58	2,151
Bolivar	76	1,869	Humansville	138	1,055	Plattsburg	75	1,878
Bowling Green	69	1,902	Jackson	92	1,658	Pleasant Hill	67	2,002
Breckenridge	146	1,012	Kahoka	80	1,818	Princeton	96	1,575
Brunswick	110	1,403	Kennett	98	1,569	Rockport	133	1,080
California	57	2,181	Keytesville	130	1,127	Rolla	94	1,600
Cameron	41	2,979	Kirkwood	43	2,825	Salem	103	1,481
Canton	52	2,365	La Grange	100	1,507	Salisbury	78	1,847
Carl Junction	123	1,177	Lamar	45	2,737	Sarcoxie	131	1,126
Caruthersville	55	2,315	La Plata	112	1,345	Savannah	73	1,886
Centralia	88	1,722	Lathrop	132	1,118	Seneca	140	1,043
Charleston	72	1,893	Lebanon	61	2,125	Shelbina	87	1,733
Clarence	122	1,184	Lee's Summit	106	1,453	Sikeston	136	1,077
Deepwater	120	1,201	Liberty	51	2,407	Slater	50	2,504
Dexter	77	1,862	Malden	105	1,462	Stanberry	48	2,652
Doniphan	99	1,508	Marceline	49	2,630	Ste. Genevieve	89	1,707
Edina	93	1,605	Marionville	114	1,290	Sweet Springs	134	1,080
Eldorado Springs	59	2,137	Memphis	56	2,195	Turkio	70	1,904
Excelsior Springs	74	1,881	Milan	86	1,757	Thayer	115	1,276
Farmington	85	1,778	Monroe City	68	1,929	Tipton	113	1,337
Fayette	47	2,717	Montgomery City	65	2,026	Troy	127	1,153
Ferguson	145	1,015	Mound City	90	1,681	Unionville	64	2,050
Festus	116	1,256	Mountain Grove	148	1,004	Vandalia	124	1,168
Fredricktown	95	1,577	Mount Vernon	119	1,206	Versailles	117	1,240
Gallatin	84	1,780	Neosho	46	2,725	Webster Groves	71	1,895
Glasgow	91	1,672	New Franklin	126	1,156	Wellsville	125	1,160
Granby	54	2,315	New Madrid	102	1,489	Weston	144	1,019
Grant City	108	1,406	Norborne	121	1,189	West Plains	42	2,902
Greenfield	109	1,406	Odessa	107	1,445	Willow Springs	135	1,078
Greenville	139	1,051	Oregon	143	1,032	Windsor	101	1,502

CITIES WITH POPULATION OF 3,000 AND OVER, WITH RANK IN THE STATE

Cities	Rank in State	Pop. 1900	Cities	Rank in State	Pop. 1900	Cities	Rank in State	Pop. 1900
Aurora	16	6,191	Independence	14	6,974	Poplar Bluff	32	4,321
Boonville	31	4,377	Jefferson City	8	9,664	Rich Hill	35	4,053
Brookfield	20	5,484	Joplin	4	26,023	Richmond	37	3,478
Butler	38	3,158	Kansas City	2	163,752	St. Charles	12	7,982
Cape Girardeau	27	4,815	Kirksville	17	5,966	St. Joseph	3	102,979
Carrollton	36	3,854	Lexington	33	4,190	St. Louis	1	575,238
Carterville	30	4,445	Louisiana	22	5,131	Sedalia	6	15,231
Carthage	9	9,416	Macon	34	4,068	Springfield	5	23,267
Chillicothe	15	6,905	Marshall	24	5,086	Trenton	21	5,396
Clinton	25	5,061	Maryville	29	4,577	Warrensburg	28	4,724
Columbia	18	5,651	Mexico	23	5,090	Washington	40	3,015
DeSoto	19	5,611	Moberly	11	8,012	Webb City	10	9,201
Fulton	26	4,883	Monett	39	3,115			
Hannibal	7	12,780	Nevada	13	7,461			

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